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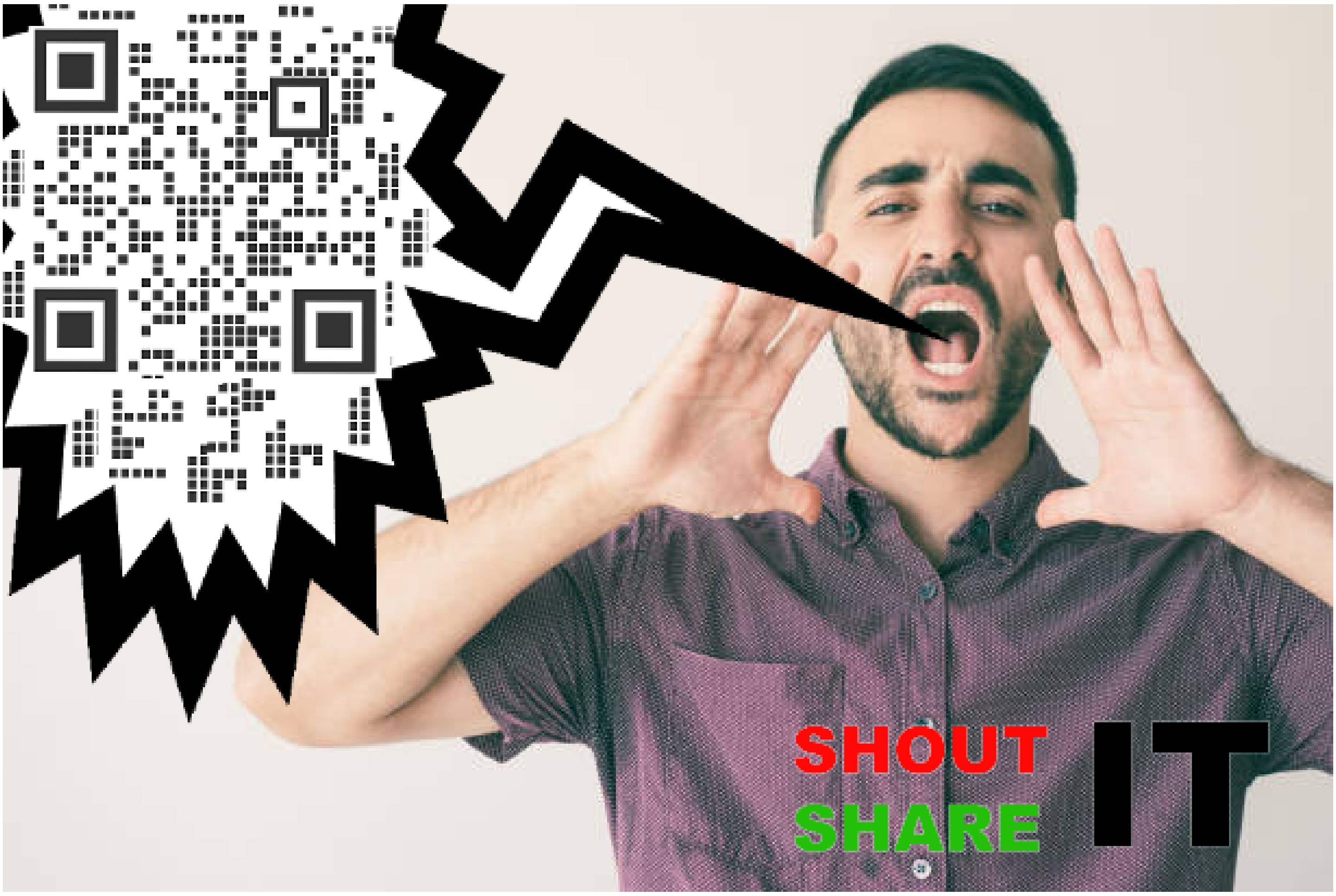
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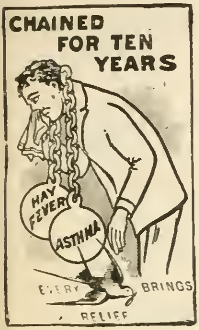

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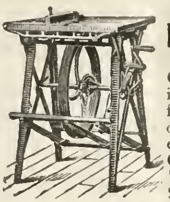

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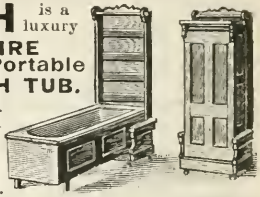

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THE AMERICAN BEE-KEEPER

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NATURE.

Thou art a friend that ever bides with me,
Steadfast as sun to day or moon to night,
Or as the stars which shed revealing light
O'er dusky meadow and mysterious sea.
Many wise lessons have I learnt of thee:
The winds have been my teachers, and the flowers,
The snows of winter, and the vernal flowers,
And white clouds, sailing tranquilly
Above my head, 'cross heaven's radiant face,
O joy to know thy ministering servants move
In my behoof on tireless steps of love!
Heart-discord now to calm has given place.
I would be true to thee, my heart to thine—
The feebly-human to the Strong-Divine.
—William Cowan.

Dummies.

(By G. M. Doolittle.)

SOMETIME ago I touched a little upon dummies being used when working for comb honey, so that a better yield might be secured. A request comes in that I go more into details in the matter, explaining more fully about how to make, use, and what I do when I remove them from the hive at the close of the white honey harvest. This I will try to do, with the permission of the editor.

For a dummy to take the place of a single frame I know of nothing better than a piece of inch or seven-eighths inch board, cutting the same just the size of the frame, less the top bar. To this piece of board nail the top bar, nailing it so it projects on either side just the same as would be done when making frames. At any time when we wish to contract the hive just one frame, take out the frame of comb and hang this board or dummy in the place of the frame, and you have a hive just as good to all intents and purposes, as if said hive had been made to take one frame less. Or in other words, this changes an eight-frame hive to a seven-frame, a ten-frame hive to a nine-frame, etc. If I wish to change an eight-frame hive to a six, or a ten-frame hive to an eight, I generally use two such dummies, one on either side of the hive, to take the place of two frames removed. But, besides the dummies made in this way, I make others to take the place of two frames, and these are made by nailing two frames together and then covering the sides with one-fourth or three-eighths stuff, as these are lighter to handle, and as a rule cost less than to use a piece of two-inch plank, though the plank, or two of the dummies first described, will answer the purpose equally well. Any cheap lumber will answer the purpose for dummies just as well as the most expensive, providing that, where frames are covered with thin stuff, this must be good enough so it will "hold bees," otherwise the bees will go inside the dummy and fill it with honey, which is not to the advantage of the owner.

If I wish to take out three frames from a hive for any reason, I use one of the two-frame dummies at one side of the hive, and a one-frame at the other side. If I wish to take four frames from any hive then I use two of the two-frame dummies, one at either side of the hive. Where a colony is so very weak that I wish to take all of the frames away but two or three, thus making a nucleus of said colony, then I bring the two or three frames to one side of the hive and hang one of the one-frame dummies next the last or outside comb put in. Now, as told in the other article, if I have a colony whose queen only occupied nine frames with brood, at the commencement of the honey harvest I should take out the frame or comb not occupied, and hang in its place one of the one-frame dummies. If the queen only occupied eight of the ten frames with brood, then I should take out two combs and hang in two dummies, one on either side. If the queen only occupied seven combs with brood, then I should take out three frames, using a two-frame dummy on one side and a one-frame on the other side; but I should mark that colony to have its queen superseded at the close of the honey harvest, for a queen that will not keep more than seven Langstroth frames occupied with brood, under favorable circumstances, at the commencement of the main honey harvest, is not worthy of being kept at the head of any colony. If I happen to have a queen poor enough so that she will only keep six combs occupied with brood, then I use one of the two-frame dummies on either side of the hive to take the place of the four frames taken out.

Why do I put them on either side, rather than all on one side? Because, by doing it in this way it throws the brood that they have under the center of the surplus arrangement, and in this way the bees work out to either side of the surplus to better advantage than they would were all the dummies placed on one side.

What do I do with the combs taken out? These are put in weak colonies, or nuclei, if I have such. Otherwise they are placed 'in hives which are placed over weakish colonies, which protect them from the larva of the wax-moth; said protection being the best of any I know during warm weather.

When do I take the dummies out? At the end of the white honey harvest they are taken out and carefully stored away to be had at a moment's notice the next season. And when they are taken out the combs that were formerly in the hive, are taken from where they were placed for protection and returned to their old places, so that the bees may fill them with honey from the fall flow for wintering.

In this way we secure the white honey which brings the better price, in marketable shape in the sections; the dark being just as good for wintering.

Borodino, N. Y.

The Romantic Side of the Early West.

Mr. W. L. Taylor, the well-known artist, has just returned from a trip to the far West, whither he went to secure sketches and material for a new series of pictures he is to paint for reproduction in The Ladies Home Journal. These will present the romantic phases of the pioneer West. There will be five great paintings, showing: The Early Pack-Train Crossing the Mountains; The Stockade Days; The Picturesque Trading Post; The Early Mining Camp in the Mountain Gorge; The Prairie-Schooner Crossing the Plains.

The Langstroth Hive.

(By L. E. Kerr.)

OWING to the great number of styles and sizes of frames and hives now before the public, all being up to the standard, and manufactured by greatly esteemed members of the bee-keeping fraternity, it leaves the subject of hives a very delicate one to touch upon, and for this reason writers usually no more than touch upon it, at most; and, consequently beginners are "at sea" when it comes to choosing which of the many styles to adopt.

L. E. KERR.

At present there are five styles of hives, namely, Danzebaker, Langstroth, Gallup, New Heddon and the old-fashioned box-hive. There are also distinctly five different methods of management, each especially adapted to a certain style of hive.

It is not possible for anyone, no matter how much experience he may have had, to say positively that any hive is best, further than to say which is best for his own locality; for the reason that no two localities are alike, and therefore call for different management.

There are more bees kept today in the old-fashioned box-hive than any other one style. The question has been asked in these columns: "If the Heddon is so far superior to the Langstroth, why don't it supersede the Langstroth?" Now the Langstroth is considered by some to be better than the box-hive, and the question is, if the Langstroth is so far superior to the box-hive, why doesn't it supersede the box-hive?

After all, the Langstroth is greatly superior to the old-fashioned box; but it is worse than absurdity to regard the Langstroth as a faultless hive. Though it may be the most perfect hive in the universe, still, the Langstroth, and style of management is faulty. One of our greatest queen breeders says a square frame for nuclei is by all odds the best. A long, shallow frame, such as the Langstroth, is out of proportion; and soon only one end or the other will be occupied by the bees. This is not the only fault of the Langsworth; still I have never held that the Langstroth was more faulty than others; though I have said the Langstroth hive and system is defective and still hold it to be the case.

Hurricane, Ark.

What mighty contests rise from trivial things! —Pope.

The Bee Martin.

(By Bessie L. Putnam.)

THE kingbird, locally known as bee martin or bee-bird, may be readily recognized by its resemblance to the well known phoebe, its near relative. Each has the characteristics of the flycatcher family strongly developed, among the most prominent of which are the strong bill, hooked at the tip and the bristles at the base, —admirably adapted to catching insects.

It is the largest of the group, between an English sparrow and a robin in size. The top of the male's head is quite black, the crown containing a concealed patch of orange-red. The back is dark ash color, breast light ash, the tail conspicuously margined with white. The female lacks the crest.

It is a native of the entire United States, though found sparingly west of the Rockies. It arrives early in May, leaving middle latitudes the latter part of September, and eventually wintering in Central or South America. It is a frequent resident of the orchard during summer.

BESSIE L. PUTNAM.

Much has been said by bee men condemning it for eating bees. On the other hand, a member of that excellent service, the U. S. Biological Survey, assures us that of 281 stomachs examined but 14 contained the remains of bees; and of the 50 therein discovered, 40 were drones, four workers, and six were too badly broken to be identified. The conclusion naturally drawn is that the kingbird's bee-eating propensities have been grossly exaggerated.

Yet there are few bee-keepers who have not seen this bird swoop down from the top of some tree near the hive or course of flight, seize a bee on the wing, and return to its lofty perch, apparently to feast upon it. Presently the movement is repeated and another victim is added to the list. And thus the aerial foraging may continue for some time. It is hard to reconcile those who have repeatedly witnessed such maneuvering to the conclusions of the scientists even in the face of the empty stomachs.

A correspondent of Gleanings, however, offers an explanation which seems worthy of consideration. He says: "This bird seizes a worker, which he much prefers to a drone, by the abdomen, giving the bee a few sharp raps against the perch. He then passes the body of the bee its entire length transversely between his upper and lower mandibles, by a peculiar motion of the latter. This is continued until the juices are thoroughly extracted, when he opens his mouth and drops the useless carcass to the ground. No wonder, then, that we failed to find workers in the stomach. But how about the drones? Well, when a drone is seized he is swallowed at once; and when several have been taken into the first stomach the bird sits on the perch for half an hour, sometimes longer, when, by a few motions of the neck, the casting is brought up. This is about the size and shape of an ordinary pea, and consists of the hard indigestible portions of insects.

"I do not believe that the kingbird

ever intentionally swallows an insect having a sting. Drones are not often found in the stomach of the kingbird, for the reason that he prefers workers; and also for the reason that, while the casting is forming, he is not generally near the apiary, and therefore not so likely to be killed at a time when drones might be found in the stomach."

The above theory is emphasized by an observation of Nuttall, that indigestible portions of beetles are cast aside by the kingbird in the manner described by Mr. Wright in Gleanings.

But granting that it eats or destroys all the bees imputed to it, is the injury, save when by chance a queen falls a victim, sufficient to balance the good done? Scientists have found in the contents of the stomachs examined a positive evidence not so easily refuted as that negatively implied regarding the honey bee. There were, often in large numbers, canker worms, clover leaf weevil, gadfly, rose chafer, ant, grasshopper, asparagus beetle, potato beetle, click beetle, cutworm and robber fly. Thus, if it eats bees it also feeds upon their enemies.

Besides, it is a sworn enemy to the crow and hawk, fearlessly attacking either whenever they come in contact; and though decidedly inferior in size, it invariably puts the larger birds to flight. Thus it is not only a protection to poultry, but to other insectivorous birds, even though its conduct to the latter is not at other times either polite or just.

In short, is it not well to consider the other side of the question before resorting to the shot gun? Save in aggravated cases, the view of Prof. Cook seems wisest:

"In view of the good that these birds do, unless they are far more numerous and troublesome than I have ever observed them, I should certainly be slow to recommend the death warrant."

Harmonsburg, Pa.

Not "Anybody, Anywhere."

(By Arthur C. Miller.)

THERE was recently issued by the Secretary of the Board of Agriculture of one of the states, a most remarkable and misleading pamphlet on bee-keeping, setting forth the great profit to be derived from the industry the ease with which it might be accomplished anywhere, and adding that anybody could keep bees. It is to these last two statements that I wish to call the attention both of those who have just started in bee-keeping and of those who contemplate doing so.

"Anbody" is not fitted to keep bees, nor is "anywhere" always suitable for the purpose. It is not easy to say who should and who should not keep bees, for so many factors enter into the problem. In a general way those persons who will attend to the proper details at the proper time, and who will take uncomplainingly a bee sting, or a lot in an emergency, may enter this industry. The careless, the shiftless, the procrastinators, had better let it entirely alone, both for their own good and that of their neighbors. In this as in most other occupations, the careful, painstaking persons are generally the successful ones.

In most parts of our country excepting some of the very arid regions, it will be found that one or more colonies can exist, and will generally give some surplus honey to the owner, but that this industry will be profitable is an entirely different proposition. Because the hive that has stood in the fence corner for so many years has never been without bees, and because it has given a little honey now and then, is no proof that any substantial profit could be secured from it if properly cared for, or that more than the one colony could live and thrive in that locality. However, where one colony does well, others as a rule, will do so too, provided that so many are not put there as to overstock the field. Beginners should bear in mind that it is just as easy to overpasture a region with bees as it is with cattle, and that if other persons are keeping many bees near by, it will be well to enter upon the industry very cautiously or not at all. The average New England rural districts will profitably support about 50 colonies within a radius of one and one-half miles. Many of the poorer parts will not support a third of that number, and in some of the better ones twice as many will thrive. Before entering on this industry, or if started, then before extending, try and learn how many colonies of bees there are kept within a radius, of say, two miles; then ascertain if the bees there are yielding fair honey returns to the owners, and if so, one may safely add a few to the number. This advice is for those who wish to keep from two to ten colonies. If it is intended to go into it on a larger scale and the home field is found to be pretty well occupied, the only thing to do is to find some other location.

In villages and the suburbs of cities it is often impossible to learn whether or not any bees are kept there, and under such circumstances a start may be made with one or two colonies, and if it is found that the district yields sufficient nectar, the number can be increased.

Providence, R. I., Nov. 9, 1901.

Where he falls short 'tis Nature's fault alone;
Where he succeeds the merit's all his own. —Churchill.

"There is no brighter horison in all the world than that we ourselves look upon over the rim of the mountain. There is no gladder moment in all the future than that which passes before us in the splendid presence."

Don't Discourage the Farmer.

(By A. E. Willicutt.)

I NOTICE there are a few bee-keepers who seem to think that farmers and others who cannot give their entire time to bee-culture, should not be encouraged to keep even a few colonies. It is claimed they greatly damage the honey market with their few pounds of poor honey. Now, it has been my experience that most people who buy honey for table use, will pass by poor grades, and pay a fancy price for a fancy article.

In this locality those who give their bees but little care, do not produce enough honey to injure a very small market. If they produce enough for family use they do very well.

Are not these troubles more imaginary than real?

Did our large producers, specialists and noted queen-breeders, like "Jonah's gourd," spring up in a single night, or did they, like the rest of us, start with a few colonies, and work their way upward?

Did the reader ever see, or hear of a horse that wasn't a colt, before it was a horse? I never did.

Did not some of our most successful apiarists commence bee-keeping in some back farm yard, with only one or two colonies?

If I am not in error, nearly all of our most experienced bee-keepers advise beginners to commence with only a few colonies, and those in connection with some other business, adding more bees as their experience increases. It isn't all those who study to become lawyers, doctors and teachers that make a success of it. Neither do all those who engage in bee-keeping make specialists; but there are some who do surely ascend the ladder of success. For this, if for no other reason, should we not encourage others to engage in bee-keeping?

No, let us not try to discourage those engaged in other lines of business, from taking up bee-keeping in connection with it, for from these amateurs, there may arise another "Langstroth."

Swift River, Mass., Nov. 15, 1901.

THE Bee-Keeping World

By F. Greiner and Adrain Getaz.

Siberia.

Mr. Gericke reports about apiculture in West Siberia as follows: The winters are very severe, the temperature often being as low as 58 below zero F., continuing with heavy falls of snow for seven months. The summer is rather tropical, beginning the middle of May, ending in September; spring and autumn are practically absent. All surplus honey is gathered from linden-bloom. The country abounds with basswood trees, of which seventeen different varieties may be found, blossoming at different times, so that the honey season is stretched out over much more space than in North America. Basswood timber and lumber is used in the manufacture of bee-hives and the construction of block-houses, which serve as winter repositories for the bees. Very little honey is consumed by the bees, although the winters are long and severe. As a general thing the bee-keepers in Siberia are specialists, six hundred colonies in one apiary being no uncommon thing. The hives in use mostly are of American patterns. A sort of Hannemann system is followed. Several swarms, after drones and queens are sifted out by a Hannemann sieve, are united and hived into one single hive; the aim being to have about 15 pounds of bees to work in one hive. Before placing such a swarm in the yard it is kept in a cellar for four or five days; if this is neglected swarms are likely to abscond. A colony of such strength will usually store about one hundred pounds of comb honey, which sells readily at seventy kopecks (a kopeck equals about two-thirds of a cent.)

Japan.

Bee-keeping in Japan is described by Prof. Junker, as follows: The native bees of Japan are very docile. It is neither necessary to use smoke or veil. The hives in use are of rather primitive order and consist of small wooden boxes with a movable front piece. These hives are collected in expressly constructed straw-houses or sheds, otherwise the bee-keepers, which are but few, exhibit no skill in the management of their bees. The front end of the hive is removed and as much of the comb. brood and honey is cut out as seems best to the operator. Usually his judgment is erring, and too much is cut out. In consequence about two-thirds of his bees are lost in winter, which is not even severe.

Ireland.

The Postoffice Department of Ireland is in a predicament. A swarm of bees had taken possession of a public mail box in Dublin. The owner of the swarm had been prevented from opening the box to secure his bees and therefore left them in it. This in turn proved effectual to prevent the mail carrier from collecting the mail matter in the box. A report was sent to the Postmaster General, who then offered a reward of two shillings to any one removing the bees. No one has been tempted by the generous offer so far, or wanted to take the risk, for the owner of the bees made threats to prosecute anyone molesting his property, claiming that the officials had prevented him from recovering the bees. And there the matter stands, many people waiting for their mail which is in the custody of the swarm of bees in the mail box.—(From Bienen-Vater.)

Germany.

Germany levies a heavy import tax on honey, but admits bees free. Some shrewd people in adjoining countries, particularly in Holland, bring hives heavy with honey over the line, then brimstone the bees and sell the honey, thus avoiding the import tax. The German bee-keepers have raised a cry and demand more effectual protection, limiting the weight of a hive of bees to about 20 pounds. In America very little harm would result from such imports of honey-laden hives. Consumers here are more exacting and would not buy honey from brimstoned colonies, except at a very low figure, and even then not in large quantities.

At a bee-keepers' meeting in Reichelsheim, D. Ellenberger said that he weighs every colony after the honey season to ascertain the amount of honey each has.

Dickel stated that last winter many colonies starved with plenty of stores in adjoining combs of their respective hives. Poor and ill-constructed hives, he thinks, are responsible for it.

To winter bees successfully or perfectly has always been regarded as the master-test of a bee-keeper. Rev. Schick expressed his sentiments on that score by saying, the matter of wintering bees is not a serious one, providing certain rules are carefully followed, and then he enumerates a long string of such. Editor Schrimph made the remark that the long string of rules was sufficient proof of the difficulty and seriousness of the wintering problem.

At the same meeting of bee-keepers Dickel explained in brief words his theory of the equality of all eggs laid by a normal queen. He has never offered any proof except such as he found in his experiments with the bees themselves. He demonstrated on a hive of bees having been made queenless 11 days before the time of the convention the correctness of his theory.

The adulterated honey, as found in Germany, is usually decorated with showy labels. The reading on them does not contain real falsehoods, but is so ingeniously worded as to produce in the would-be-purchaser the belief that he has the genuine article before him.

Rabes in Deutsche Bienenfreund advises to daily feed all colonies after the close of the honey season and after all surplus honey has been removed, small quantities of honey or syrup in order to induce the bees to keep up breeding till late in September. The young late-hatched bees will winter much better than the July and August-hatched bees, which will all be gone by March, so he claims. (The bees of the writer stopped breeding earlier than common this year. In years past we have not found it profitable to excite our bees after the close of the season by stimulative feeding.) Pastor Wiegand stimulates his bees from January on, and uses artificial heat in his warmly-constructed house apiaries. He is successful in producing very strong colonies early in the season, claiming one colony so fed up is equal to two not so fed.

Fraberger said some of his colonies not only drove out the drones after the honey season had closed, but they also killed the old worker bees, intimating that bees did not live up to our teaching: "Honor the aged."

Carbolineum has been spoken of in Gleanings and other bee journals here as cheap and very effective paint for hives. The Munchener Bienen Zeitung says, the odor of this paint will so taint the honey within the hive so painted as to make it objectionable, and adds the advice: "Go slow."

Weinberger showed at a honey show in Augsburg, that bees do use the wax of the foundation for building it out into comb. He made foundation from blue-colored wax, when the foundation was all drawn out it was of a decidedly blue color.

Reidenbach, editor of the Phaelzer, B. Z., says in an editorial: The secret of securing gilt-edged extracted honey is to extract from newly built combs. (The question whether old combs impair the quality and color of the honey stored in them was not agreed upon in Buffalo; but I believe the majority of honey-producers were of the opinion that it did not. Individually, I think it does to some extent.)

It is hinted in the Deutsche Imker, the reason why the addresses delivered at the joint meeting of the two great and principal bee-keepers' organizations in Breslau lacked in quality has been on account of improper management. It is suggested, that whatever is offered for the purpose should first be submitted in writing to the committee in charge, they to select what they consider fit for the occasion. It would spare many the necessity of listening to matter of no value.

An ordinance has been passed in some parts of Germany making it unlawful to destroy the blooming heath. This for the production of bee-keepers.

Quantities of honey are often gathered in Germany from pine and fir trees. The honey is very thick and cannot be extracted, but is of very poor quality otherwise and proves especially detrimental to the bees during winter.

Warmth is the life-element of bees, cold is their death enemy. Protect your bees against cold by suitable hives or otherwise.—Wurth.

To clean hands from propolis Die Biene recommends: Wash with soapsuds and rub off with pumice stone. (The writer of this finds thin whitewash quite effectual.)

In a discussion on the Dickel theory, the case of a queen which never laid a drone-egg was mentioned. In uncapping what was supposed to be drone brood, it was discovered that instead of drones, the drone cells contained workers. Later on, drone comb was given purposely, but invariably with the same results. That queen lived four years, 1873 to 1877. The fact was reported in the Muenchever Bienen Zeitung.

Russia.

Ed. Uhle reports from Lachina as follows: Bees wintered well and spring was favorable. Just before basswood bloomed we had south wind with abundance of rain. During the following bright days the nights brought heavy dews and the basswood secreted nectar plentifully. We also had a fair harvest from buckwheat, but the season lasted but 15 days. A sharp wind caused the secretion to cease. A heavy frost, August 29, froze cucumbers, etc., and ended the honey season.

England.

In the British Bee Journal, Mr. Cowan insists that the color of honey is due to some pollen mixed with it and gathered on the same flowers at the same time. With all respect due Mr. Cowan, I may say that his assertion, while it may be true concerning the flowers and honey he has observed, does certainly not apply in all cases.

Switzerland.

In the Revue Internationale; is a study of formic acid. Among the very interesting facts reported is a chemical analysis of different classes of honeys. This reveals the facts that the amount of formic acid in buckwheat is about 1-600, and in white clover honey only 1-1500. A worker cell full of honey contains something like 1-1000 of a gram of formic acid. On the other hand the smallest drop of formic acid obtainable is at least 200 times that size. This seems to dispose of the theory that the bees deposit a drop of formic acid in each cell when they are capped.

The best method of using formic acid against foul brood is that of Mr. Bertrand. A mixture is made of acid formic at 25 per cent. strength, 2 parts; water, 2 parts; alcohol, 1 part. Three or four ounces are put in a saucer or some other convenient vessel (not metallic) and put in a super or somewhere in the hive to be treated. The vapors of the solution reach everywhere in the hive, and destroy the germs of the disease. The dose is renewed every week until a cure is effected. Two or three doses are usually sufficient. If not, the queen is infected and must be changed and the treatment continued.

The above is given by the best authorities. However, in view of the facts admitted here (in the United States), I would suggest that it is doubtful that the vapors of the formic acid reach the deep cells of honey, especially those that are capped, and I would suggest that such honey be removed or consumed according to the McEvoy method, and the foul brood germs that might be therein, be thus eliminated. The possibility of a queen being infected and laying infected eggs has been denied here. But microscopic examination by Cheshire and later on somebody else, whose name I cannot recall just now, have shown foul brood germs in the ovaries and eggs of queens taken from diseased colonies. In the above formula, the addition of alcohol increases the capacity of the evaporation.

While in the line of implements, mechanical appliances, etc., we are unquestionably ahead of our European brethren; we can nevertheless get some good hints from them. In looking over the advertisements of the Revue Internationale, I find a tinned wire cloth carefully made to take the place of perforated zinc. The claim is made that the sharp edges of the zinc wear out and cut the bees' wings. I do not know whether this is true or not, but it might be investigated. There are also queen cages, similar to the West cages, but made of wire cloth, soldered to two tin rings, one at each end. They must be very cheap. Candles about one-fourth of an inch thick and a few inches long to fasten combs or foundation to frames or wires. They are made of wax. To use them, light them and let the drops of melted wax fall where needed. I may say here that I have tried the process but have not succeeded very well. I prefer to apply the melted wax with a brush. A brush made of hair does not work so well. I prefer a home-made brush made with cotton twine instead of hair. It holds the wax better.

A very ingenious comb lifter is also noted, but could hardly be described without pictures. It grabs the comb to be taken out at both ends, and by the way it is constructed so it acts like a lever; it seems to enable one to pull out a comb held by brace combs, propolis, etc., without much force, and, if properly handled, without jar.

Belgium.

A bee-keeper, trying to gather a swarm, was badly stung. He took sick, fell down and died in a short time. Investigation by a doctor brought out the facts that he was very sensitive to bee stings and worse than that, he had a serious heart disease.

The question was asked, if a strong dose of brandy would have done some good. The doctor announced that very likely it would, as the venom of bees seems to act like that of snakes. He further explained that the effect of the snake's venom is to paralyze the nervous system, especially some portions of it. The effect of this is to stop the beating of the heart. However, the venom is soon dissipated and taken away by the lymphatic system. The effect of the brandy, or alcohol, is to counteract the paralysis caused by the venom, and if the movements of the heart can thus be continued until the venom is dissipated, the patient is saved.

In Progres Agricole is given a recipe for cookies, or a kind of crackers, as follows: Mix equal parts of sugar, honey and unsalted fresh butter, add the juice of one or two oranges. Add gradually enough flour to make a dough of suitable consistency. Roll to a thickness of about three-fourths of an inch. Cut and bake.

In Champagne Agricole is the recipe of a kind of preserve. Substantially it is a preserve of pears in which honey is used in place of sugar. To improve the flavor, a little pepper, some cinnamon, a few grains of salt and one or two spoonfuls of good brandy are added.

In the same paper, some uses for propolis are mentioned. To prepare it in a convenient form, put it on a piece of sheet iron over a stove or slow fire, and when soft, press together, and roll in sticks like sealing wax. It can be used for sealing wax, for grafting wax, to stop holes in buckets and other tin utensils, which are not used on a fire, or do not have to contain hot water. Also as a filler to stop holes in wood. Burned in a room it purifies the air. A cheap varnish can be made by mixing two parts of propolis, one part of wax and four parts of linseed oil. Propolis makes an excellent ointment for bruises, cuts, etc., as it is an antiseptic. In order that the ointment should be soft enough it is necessary to melt the propolis with some mutton suet or unsalted butter.

The Revue Apiculture asked 21 of its subscribers whether they preferred to have the extracted combs cleaned by the bees or not. Fourteen answered no, saying it is too much trouble for nothing, objecting chiefly to the danger of starting robbing. They say that the uncleaned combs are a powerful stimulant to start the bees to work in the spring, and that the moths never touch a comb daubed with honey.

Mr. Fievez (Progres Agricole) adds to the syrup for feeding bees for winter, five grams of salt and one of borate of soda to three pounds of syrup.

Of all bad things by which mankind are
cursed,
Their own bad tempers surely are the
worst. —Cumberland.

What is it to be wise?
'Tis but to know how little can be
known;
To see all others' faults, and feel our
own. —Pope.

OUR CORRESPONDENTS

WHY IS SPRING FEEDING UNPROFITABLE.

Cuba, N. Y., Nov. 13, 1901.

Editor American Bee-Keeper:

One page 206 American Bee-Keeper, for Nov., Mr. L. E. Kerr says that no good arises from feeding bees in the spring to stimulate brood rearing. Mr. Kerr, will you please tell the beginners why, and what were the practical demonstrations, as I am but a beginner, my observations may not be correct, but does not a queen lay better during a slow honey flow than through none at all? even if there is honey in the brood chamber?

The colonies that produced the most honey for me this season were the ones that were fed in the spring. I feed with a Boardman entrance feeder for I do not think colonies fed for stimulative purposes should be fed over the cluster, as they will be distributed in placing the feeder and will take the syrup when it is too cold, which induces them to fly when they should not, but with the entrance feeder, they seldom do so.

Now, Mr. Kerr, when you are giving advice to beginners, please tell us why you would or would not do these things, as they are apt to mislead us.

Yours,
T. L. Powers.

L TINS FOR SUPERS.

Paris Station, N. Y., Nov. 30, 1901.

Editor Bee-Keeper:

Those who have used the dove tail supers may find the flat tins supporting the section holders, too frail to stand the strain. I have had them bend till the section-holders would touch the top of the frames, and when you take off the super you lift up the frames and so disturb and often kill the bees.

Mr. J. S. Calbreath, in May 15th Gleanings described a plan which worked so well with me that I am at work fixing all my supers that way. I will here try to explain in American Bee-Keeper how it was done and those who try the plan I believe will be pleased with it.

Take a galvanized iron strip the length of the super-end, and bend it in the shape of an L, making about one-half inch for the section holder to rest on and about one inch for the nails to be nailed to the end of the super. Cut across the super-end at the bottom one inch wide and one-sixteenth deep so as to let the iron go back far enough so the section holders will not bind when you put them in as one cannot bend the iron just square at the corner. I used No. 26 iron, though lighter may do as well.

I have used little blocks of wood nailed on the top of the end blocks of the section-holders, but as some supers do not have any groove for the blocks to hang in and the blocks are apt to loosen and drop off, the L iron, or angle tin is much better.

Yours truly,
W. E. Head.

JUST A CHAT.

Walker, Mo., Dec. 10, 1901.

Editor American Bee-Keeper:

Have just read a very interesting letter in the Bee-Keeper, from Mrs. Smith, away down in Florida, where I have always thought bee-keepers had no troubles, but I guess location does not make much difference. When one thing does not interfere, some other does, so I guess there is about a stand off as to location. Down in Florida, it seems, the bears have to be fenced against, also in places the bees have to be put ten feet from the ground. It seems to me such an elevaiton would be very inconvenient and expensive. I would let the mangrove honey go—and find a more suitable location.

I commenced keeping bees when 12 years old that was in 1857—have never been without since then. So you see I have been clear through the clearing house, so to speak. While I have not taken much interest in the various questions and discussions that go through the journals from time to time, I must say that I am often much amused. One thing I learned long ago, and that is you don't have to swallow everything you see in print. Long before I ever saw a bee book or heard of Langstroth, I had in operation a movable comb-hive, and am still using it. I also had a smoker before I ever heard of Mr. Bingham. Well, as I did not start out to say anything in particular—but to just have a little say along with the other fellows, will give the readers of your journal some questions to answer; and if they are not answered right, will tell them what I think about them later on:

First. From what does the laying worker originate?

Second. Why does not all queenless colonies have a laying worker?

Third. Why will a queenless colony fail to produce a good queen when only supplied with a few eggs?

These questions should be understood. And I hope to have them answered through The Bee-Keeper, by some who have given the matter proper thought.

Perhaps Uncle John Hardscrabble can answer the questions for us, as he seems to want to tell something very bad. Maybe if he can't, the fellow he refers to as being free to give an opinion on most any or everything, will, although Mr. H. thinks he is very ignorant on some things.

Well, we have had a fairly good season in summer months this year, fine growth of white clover early, from which the bees did well, then the drouth set in and killed almost everything; but about August 1st, we had some rain, and a splendid fall harvest. Our bees are in splendid condition for winter, and we expect another good season next year; although our white clover will be scarce for a year or two on account of the drouth. May be, I had better close this little epistle, or Uncle John will get after me, along with the balance.

Yours truly,
Geo. H. Mobley.

GIVE THEM A CHANCE.

Derby, Vt., Dec. 16, 1901.
Editor American Bee-Keeper:

It is with the best wishes of the many friends of N. A. Blake and family (he being a noted bee-keeper of Bee Plains, Vt.) that they leave us to make their future home in Southern California, may the people in that community give them a hearty welcome, as they are upright, Christian people and will be greatly missed by all who knew them in this section. May they prosper in their new home, is the sincere wish of the writer.

A Bee-Keeper

WILL BEE-KEEPERS HELP?

Grayson, Calif., Dec. 12, 1901.
Editor American Bee-Keeper:

Dear Sir:—You know the apiarian conditions existing in California from experience. Some times we get a big crop and sometimes a very small one. This year our crop was estimated at from 200 to 1,000 car loads. Of course, the market was demoralized. You may have had a taste of that uncertainty, but we got our mouths full of the flavor. Our only remedy is to get the Division of Statistics, Department of Agriculture, to investigate and report the honey crop. To get that done it is only necessary to get congress to make a larger appropriation for statistical purposes. If every bee-keeper in the land would write to his representative in congress, also to both senators from his state, there is little doubt as to the success of the move. It should be stated plainly that an increase is desired for statistical work; and if special or local reasons can be given, so much the better. From Congressman Needham, who resides in this county, I learn that action should be prompt.

Yours truly,
W. A. H. Gilstrap.

Swift River, Mass., Dec. 18, 1901.
Editor "American Bee-Keeper."

I have just received the book, "Life of the Bee," which you have so kindly sent me as a premium. I haven't read it yet but have no doubt it will prove very interesting. Thanking you for your decision in my favor and wishing you and all the readers of the American Bee-Keeper a Merry Christmas and a Happy and Prosperous New Year, I remain as ever,

Yours truly,
A. E. Willcutt.

RULES IN SWARMING, ETC.

Wakeman, Ohio, Dec., 7, 1901.
Editor American Bee-Keeper:

In beginners' lesson No. 4, in the November Bee-Keeper, by F. G. Herman, he says, "when bees desire to swarm they enlarge an ordinary worker-cell into a queen-cell and feed the inmate royal jelly," etc., and that the old queen makes vigorous efforts to destroy queen-cells that the bees have built preparatory to swarming. This may be orthodox teaching, but it is not the way bees do in my location.

I believe that in preparing to swarm bees do not build queen-cells around ordinary worker-cells containing young larvae but form regular queen-cell cups, that have previously been built for this purpose, and which are always to be found in every well rgeulated hive. The egg is deposited in the queen-cells by the queen whenever such cells are properly prepared by the bees to receive them.

I have seen the old queen pass freely among queen-cells and could not see any disposition on her part to destroy them, nor could I see that there were any guards there to keep her from doing so if she wished.

Post-constructed cells, or cells built after the issuing of the first swarm are always built around larvae in worker-cells, because there is no queen to deposit the egg in a queen-cell. I know it is claimed by some that the bees remove the egg from the worker-cell into the queen-cell, but as such a thing has not come under my observation during my twenty-five years as a bee-keeper. I must conclude that it is a rare occurrence.

He says a colony may have only one queen at a time. There are exceptions to this rule as to many others, as in case of supersedure there will often be found the mother and her daughter both working peacefully together until death removes the aged queen. I have known the old one to live more than six months after the young queen began to lay. I exhibited two such queens at our county fair, both on the same comb.

It is a common practice with those who use the shallow brood chamber to have two vigorous queens in the same hive. In uniting weak swarms in the spring I always use a queen excluder between the two shallow brood chambers.

and allow both queens to remain; and they will soon build up a rousing colony. Such colonies are excellent for feeding back extracted honey to have partly filled sections finished as the two queens will keep the brood chambers full of brood and the feed will go into the sections. Yours truly,

J. E. Hand.

HOW THEY DO IT IN CANADA.

Little Britain, Ont., Oct. 18, 1901.

Dear Editor:

Your invitation to send in reports impressed me—well, see Gal. 6:10 and Prov. 11:25. I secured about 20,000 pounds of white, and about 4,000 pounds of dark honey this season. This I have accomplished, but to tell how I did it is a longer tale. I suppose it would be in keeping to tell the dollars I got out of it, too. I sold 5,500 pounds to Deadman, of Brussels and 4,800 to R. H. Smith of St. Thomas, at 6 1-2 cents per pound. They found cans and paid freight. One of the season's operations was to hastily scour the neighborhood for sap tanks, just when I was the busiest, extracting; because, forsooth, the above mentioned cans did not arrive in time. You can imagne, and the Lord knows something of the remarks I made at that time. I got 7 to 8 1-4 cents in 60 pound cans, crated and carted ten miles for the most of the rest of it. Eight cents per pound for 2,000 pounds in 1 pound glass jars, for export to Liverpool. The dark I have yet, and find it sells best in 10 pound pails, six in a crate, in Ottawa and "down east."

I raise two or more combs of brood from below, which I allow the bees to fill with clover honey, and if not needed place them back in the brood chamber I extract it with the rest; if needed, I in the center. I put on the supers, contaning 12 Jones frames, about apple-bloom time, and have queen-excluding zinc nailed over the bottom, a la Doolittle. Some seasons this is too early, but as a rule it is safest, as it prevents undue swarming, and gives plenty of time for the boss to attend to 200 colonies, wthout hiring. Then, when bees get to work, lively on alsike (we grow 60 acres to the square mile, here) I extract the fruit-bloom, thorn, dandelion, willow, locust, etc., which has a peculiar flavor, and is not candied much by that time. I get seven cents for it; and it seems to be just the thing for the English market, as it closely resembles the heather. About this time I got a boy to help this season, as usual, and we managed to get around to the 200 or more once a week; four out yards of 30 to 40 each and 70 to 80 at home. I use a spring wagon, one horse and a "bike." I extract it in an old log house, implement shed and a wood house, at out yards, and at home in a good bee house.

When I find a dead colony in the spring, not already robbed out, I expose the combs so it will be robbed, as I do also with all colonies having not more than a few square inches of brood. This stimulates the others and tends to curtail the operations of the wax-moth. I spread the combs about an inch apart and uncover the hive. Respectfully,

R. F. Whiteside.

Phoreign Phun.

A subscriber of the Progres Agricole asks what is the best way to take the dead bees out of the combs when a colony dies in the winter. The editors gravely reply that there are three ways to do it.

1st. Pick the bees out one by one, with a toothpick.

2d. Put the combs where the mice can get at them. They will eat the bees. They may damage the combs some, but that don't matter.

3d. Feed the bees bountifully in the fall and the dead (?) bees will come out of the combs in the spring, of their own accord.—Adrian Getaz.

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Editorial

STIMULATIVE FEEDING.

The following paragraph is from the Rocky Mountain Bee Journal, and we have no doubt the editor of that sprightly little monthly had a copy of the November American Bee-Keeper in sight as he wrote:

"The fossils are not all rejuvenated yet. Now and then some one arises in the bee journals and decrys some of the most essential features of the whole system of modern bee-keeping. For instance, in a recent issue of an eastern journal, the assertion was made that spring feeding for stimulation of brood-rearing was not only unprofitable, but detrimental to the bees—and this statement was allowed to pass unchallenged by the editor. This correspondent either belongs to the class designated above, or else it is a very peculiar case of 'locality.'"

It is a pleasure to note that Bro. Morehouse belongs to that class, who, like ourself finds stimulative feeding often productive of good results. It is our opinion, frequently expressed, that, if discreetly done, stimulative feeding in the spring repays the cost and trouble handsomely; but, if our esteemed contemporary had been a close reader of apicultural literature for the last twenty years, it is doubtful if it would have characterized as "fossils" all who have failed to find the practice profitable. This is by no means the first time that detrimental effects have been charged against stimulative feeding, nor that its advisability has been brought into question by experienced and extensive producers of honey. We believe ourself that in other than expert hands it is a most dangerous procedure, and should not be recommended to the inexperienced manipulator. There is no part of apiary work in which the skill of a master hand becomes more imperative than in the practice of stimulative feeding in the spring.

"Locality," as intimated, has indeed much to do with the question, in our experience. In most, if not all of our northern states we should deem some method of stimulation quite obligatory, if the best results were to be obtained. In South Florida, occasions for its practice are very rare.

NON-SWARMING.

For the past two or three years a friend has tried with success to prevent swarming by giving plenty of room; two, three, sometimes as high as five supers being on the hives. He has had very little swarming and thinks it due to the fact that the bees were kept busy making honey. This method, especially to the amateur, is much easier than dividing or cutting out queen cells.—Bessie L. Putnam, in American Bee-Keeper.

Incidentally, this system of management would result in doubling or thribbling the honey crop, besides having a discouraging effect on the swarming fever. The average bee-keeper does not give room enough for the storing of honey, and then wonders why his bees get so crazy at swarming time. The difference amounts to this in this "locality." The average, slow-plodding, bee-keeper puts on one super and leaves it until full and sealed over before an empty super is added, and meantime his bees have swarmed themselves weak, and one super per colony, spring count, will be his average for the season; while the wide awake, "reading" specialist puts on the second super as soon as work has well begun in the first, a third is soon added and then four and sometimes five, with the result that he is not troubled seriously with swarming, and his yield of honey will average three or four supers per colony.—Rocky Mountain Bee Journal.

Here, again, is an instance in which "locality" must be taken into account. The Journal is speaking for Colorado, a four-super "locality," but the one-super class of localities, unfortunately predominates. Few indeed are they who would not willingly accede to the specified rules as a non-swarming measure, if the honey yields were to be thus incidentally increased. We shall not question the assertion that the average bee-keeper does not give room enough; yet we believe the giving of too much room at a time is an error very frequently committed. There can be no doubt as to its affect in retarding, or preventing swarms; but is this advantage not secured at the expense of merchantable honey? The retention of heat greatly facilitates comb-building; while a compact cluster of bees, warmth, abundant honey-flow and (at times) moderate ventilation are essential to the finish of the work. Since crowding of the bees is necessary to insure the greatest possible amount of finished sections, and crowding is conducive to swarming; yet a super should never be permitted to remain over a colony which had "swarmed itself weak," as the swarm itself, as well as the field force of the parent hive should be thrown into the sections, on the old stand, and the parent hive removed to the new location. Management, as well as "locality," has an important bearing upon the matter.

A foreign bee journal is advised by a correspondent that a celebrated American queen breeder has succeded in creating a strain of bees having exceptionally long tongues; that he sells the queens at $200.00 each; that the demand is so great for his queens at this price that he has been unable to meet it, and in order to do so has started a second establishment in South America. Verily, when elaborately displayed, printers' ink is "great stuff." Let us be thankful that the fad was throttled before the string of figures or imaginary tongue-length grew longer.

Mr. John M. Rankin, Michigan's State Apiary Inspector, has completed a laborous and successful season's work, a condensed report of which is given in Bulletin No. 73, by the Dairy and Food department of that state, in September last. Mr. Rankin visited 206 apiaries, comprising a total of 3,286 colonies, of which 402 were diseased, and these were scattered throughout 119 apiaries. Michigan bee-keepers are to be congratulated upon the appointment of so enthusiastic and competent an inspector. Mr. Rankin is a young man of whom the bee-keeping fraternity is proud, and foul brood within Michigan's borders will have a hard time of it.

"A little bird" from Texas has intimated that preparations are there being made to launch another bee journal this month. We are not "in" on information as to particulars; but the "little bird" nested in Hutto last summer. Since it is our belief that a locality cannot easily be overstocked with good books and journals, we shall await its advent with pleasant interest.

The bean fields of Southern California, it is said, afford an important part of the nectar supply for which that state is famous.

Professor Cook, in the Pacific Bee Journal, says there is but one serious impediment to the success of California bee-keepers—the great distance from the markets—and this, he has faith to believe, will be removed through the influence of President Roosevelt, by the opening of the Nicaragua canal.

Editor Hutchinson, of the Review, has recently spent a whole month in traveling about among the bee-keepers and attending conventions. He has used up his supply of note-books and is now back in the office, putting the material in shape for publication.

The December number of the J. W. Pepper Piano Music Magazine presents as its opening number for the December issue a beautiful song by R. H. Buck and C. T. Lewis, entitled "The Heart of Maryland." It is eminently singable and will be a favorite. This number also contains 22 pages of the most entertaining musical literature and halftones, which with its 21 complete pieces for the piano—10 songs, 11 instrumental—gives those who purchase it several times the worth of their money, 25 cents. For sale by all newsdealers.

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BEES

More Bee-keepers' Paradises.

E. R. Root has just returned from a 6,000 mile trip through some of the best bee locations in the world, and has already begun his series of write-ups, accompanied with fine photos, in GLEANINGS IN BEE CULTURE. The following editorial appears August 1st, and will give something of an idea of what he will describe:

> Some time ago I promised to tell about the bee-keepers' paradises in Texas. I have this on the docket, and it will appear as I take up the line of my travels. But since running across that paradise I have run into two or three others. There is one west of the Rockies, in Colorado, that is not yet overstocked with bees or bee-keepers; another one in central Idaho—in fact, I do not know but the whole state. These will be described in turn. The fact is, millions of capital are being invested in irrigation; irrigation means alfalfa; alfalfa means a paradise for bees. But I found all along my trip that alfalfa-growing preceded bee-keeping by two or three years, for it seems to take about that length of time before the bee-keepers find these gold mines that have been hitherto unoccupied.

If you are dissatisfied with your present location, and for financial reasons, or on account of health, will be compelled to leave, subscribe for GLEANINGS IN BEE CULTURE and learn something about the great South and the great West. There are many locations in the West that are not yet occupied—splendid bee locations. If you wish to learn about them, send 15 cents for a three months' trial subscription, or 25 cents for a six months' trial, or $1 for one year and one untested Italian queen. Or send $2.00 and we will send GLEANINGS one year and one of our celebrated red-clover queens.

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HONEY AND BEESWAX MARKET.

New York, Dec. 9.—The comb honey market is in about the same condition as our last advices, there being a good demand with enough receipts arriving to take care of all business. We quote as follows: Fancy white, per pound, 15c; No. 1, white, 14c; No. 2, white, 12 to 13c; Buckwheat, 10 to 11c.

Francis H. Leggett & Co.

Kansas City, Dec. 10.—Demand for honey is fair, with good supply. Supply of beeswax is light, with fair demand at 30c per pound. We quote comb honey, 13 to 15c per pound. Extracted, 6 to 7 1-2c. Hamblin & Sappington.

Buffalo, Dec. 7.—Demand for comb honey is moderate, with moderate supply; dark, very quiet at 8 to 12c, as to grade. Fancy, selling fairly well. We quote: Fancy comb, 15c; extracted, fancy, 5 1-2 to 6c per pound. Beeswax is in good demand with light supply, at 28 to 30c. Dark, etc., 20 to 25c.

Batterson & Co.

Chicago, Nov. 13.—The market is easier in tone, while prices are nominally the same, but would be shaded to effect sales. Some cars of honey en route to eastern cities have been diverted to this and surrounding points, which is having a depressing effect.

Comb brings 14 to 15 cents for best grades of white, and light amber, 12 to 13 cents; dark grades, 10 to 11 cents; extracted white 5 1-2 to 6 1-2 cents, according to quality, flavor and package; light amber 5 1-4 to 5 3-4; amber and dark, 5 to 5 1-4. Beeswax, 28 cents.

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Homes in Old Virginia.

It is gradually brought to light that the Civil war has made great changes, freed the slaves, and in consequence has made the large land owners poor and finally freed the land from the original owners who would not sell until they were compelled to do so. There are some of the finest lands in the market at very low prices, lands that produce all kinds of crops, grasses, fruits, and berries; fine for stock. You find green truck patches, such as cabbage, turnips, lettuce, kale, spinach, etc., growing all the winter. The climate is the best all the year around to be found, not too cold nor too warm. Good water. Healthy. Railroads running in every direction. If you desire to know all about Virginia send 10c. for three months subscription of the VIRGINIA FARMER to Farmer Co., Emporia, Va.

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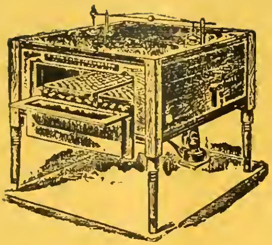

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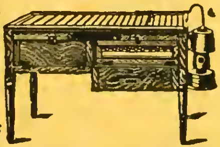

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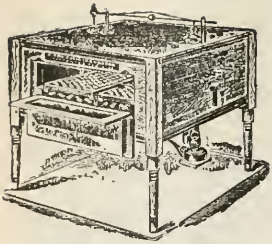

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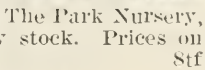

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THE AMERICAN BEE-KEEPER

Published Monthly by The W. T. Falconer Mfg. Co.

Vol. XII FEBRUARY 1902 No. 2

IF WE UNDERSTOOD.

Could we but draw back the curtains
 That surround each other's lives,
See the naked heart and spirit,
 Know what spur the action gives,
Often we should find it better,
 Purer than we judge we should,
We should love each other better,
 If we only understood.

Could we judge all deeds by motions,
 See the good and bad within,
Often we should love the sinner,
 All the while we loathe the sin,
Could we know the powers working
 To overthrow integrity,
We should judge each other's errors
 With more patient charity.

If we knew the cares and trials,
 Knew the effort all in vain
And the bitter disappointment,
 Understood the loss and gain,
Would the grim, external roughness
 Seem, I wonder, just the same?
Should we help where now we hinder ?
 Should we pity where we blame?

Ah, we judge each other harshly,
 Knowing not life's hidden force,
Knowing not the fount of action
 Is less turbid at its source,
Seeing not amid the evil
 All the golden grain of good,
Oh, we'd love each other better
 If we only understood.

—Selected.

How Can We Improve Our Bees ?

(By Arthur C. Miller.)

I'LL GIVE it up. Ask me an easier one, Mr. Editor. But such an answer will be of little value to you, so I will endeavor to suggest a few things which may help us on toward the goal.

First, what improvements are desired? That the bees do not give a surplus of honey, that they wintered poorly, that they seem cross, is no proof that the bees are to blame. On the contrary it is more than likely the trouble is with the apiarist. He fails to correctly diagnose the case. It is no easy matter to determine the true cause of a poor yield, of slow building up, of crossness and of a thousand and one other things which puzzle us all.

We examine a colony in the spring and find them below what we expected, brood is not abundant and progress seems slow. We attribute it to a poor queen, but are we at all sure? Do we know just the exact conditions of that colony the previous fall, the age of the queen, the relative proportion of old and young bees, the quantity and quality of the stores, whether the bees had a chance to arrange them to their liking after we had shifted them about? Do we know that the conditions during the winter were as favorable for this colony as for the others, that they were in no wise disturbed or made restless? Do we know that their crossness is due to "temper" or only to some temporary disturbance? How many, I wonder, are aware that the weather makes a great difference to the temper of the bees? To one who watches them closely the approach of a storm is often indicated before it is visible to the eye, by clouds or wind. If all these facts are unknown is it right to lay the trouble to the queen and promptly pinch her head off?

The difference in various strains of bees is far less than our friends the queen dealers, would have us believe. Not but that they are sincere in the belief that they have a superior strain, but do they know it? Who among them that have a trade of any great size have the time to truly test their strains? An echo answers—Very few!

Before we try to improve our bees we must know exactly what their qualities are. To learn these requires careful, painstaking observation, extending over several seasons; it requires full records carefully classified, and I believe it is first of all necessary for the apiarist to teach himself how and what to observe.

So far my advice is much like the receipt for "rabbit pie"—first catch the rabbit. Well, that is about the status of the question of improving our bees—first find out where they need improving. Next? Well, until we find some feasable way of controlling the mating of the queens there is but little we can do in the way of improvement. We can select for our propagating stock those colonies which seem to possess the greatest number of desirable qualities; we can suppress the drones of all other stocks. We can use the utmost pains and care to rear strong, vigorous drones and queens. We can stick to the stock we have in our apiaries, not constantly putting in new blood to upset what we have, by selection, accomplished. There is little danger of close, or in-breeding, for in most apiaries there are all too many chances of "out-breeding," and too, the bee generations succeed each other very rapidly, so close relationship does not last long. If it is desired to test other strains, make sure that no drones are permitted to fly from it until their superiority, if they possess it, is assured.

There is one other thing—some races do better in a given location than other races. Be sure you possess the race best suited to your section of the country and then proceed to select.

Beyond this, Mr. Editor, do not feel that I can, as yet, offer much encouragement to the maiority of bee-keepers, for improvement in their bees. And I would go even farther and impress upon them the exceeding slowness of all improvements by selection and breeding. Deterioration is generally so apparent and so rapid that many persons think improvements are equally rapid. But deterioration is due to weakened constitutions, a falling below the normal, while improvement means a rising above the average, which is a slow process. And to advance where we can only control the females is a doubly slow process.

I can, however, offer just this encouragement; scientific men and careful painstaking bee-keepers in various parts of the country are now at work on the problems of controlled mating, queen rearing, drone rearing, and some other problems looking toward the improvement of the honey bee, and from the many some progress surely should come.

Providence, R. I., Jan. 4, 1902.

How Can We Improve Our Honey Bee—A Proposition.

(By F. Greiner.)

SOME writers hold that the drone's influence upon offspring is greater than that of the mother—the queen; this, of course, having reference only to the female offspring.

It seems to me, it is very difficult to decide which one of the two parents is of greater importance in the matter of reproduction. I cannot see any reason why one's influence should be greater than that of another, taking the average; but, even should the drone's influence be of less consequence than that of the queen, it would be desirable to select the drone for mating; providing we could foretell which drone was really the superior one, the one that would transmit the most desirable qualities. Mr. Doolittle hand-picks his drones. In my opinion it is extremely doubtful that any (other) man will be successful in picking out the drones which are superior. Is there any bee-keeper anywhere who can with any degree of certainty pick out a superior queen from a batch of them, just by their looks? She may be yellow; she may be large and beautiful; she may be without fault and blemish as to her outward appearance; but who can tell what her workers will be? Is it any different with the drone? "By their work ye shall know them." But in case of the drone, he is gone when you see his work. It seems improbable that we will gain anything by hand-picking. In all probability nature will attend to that part better than man can hope to do. The very best we can do is to select the mothers of our drones.

It has (slanderously) been said, and it is generally believed that the drone has no father. If true, then he cannot transmit other properties and qualifications than those his mother possessed (without taking back to a second or third generation), and what they are, there is a possibility of knowing.

The next "snag" we run into, is "the lack of surety of mating our queens with drones of desirable parentage. This is a problem not yet satisfactorily solved. We may confine our drones and queens till late in afternoon, when, perhaps, the other drones, etc., have ceased flying. Possibly a large tent could be used advantageously. Either one of these methods are not absolutely to be depended upon.

It is my opinion that if an isolated spot could be found where no bees were present, and this spot be stocked with selected bees, and some one there engage in rearing queens, something might be accomplished. I verily believe, this would be a safe course, perhaps the only one. It would be unimportant whether this spot was a good location for honey gathering; we could get along with that, or attend to it. The principal conditions would be: entire absence of bees and favorable climatic conditions The queens produced would have to be tested in different parts of our land, and by honey producers of reputation. The best queens should then be selected and used as breeders, and this selection be carried on from year to year. If the selected spot should prove to be a good honey-producing location, the undertaking could almost be made self-supporting under proper management.

If our national government is intending to do anything for apiculture—and it seems it is—then there is the field for its labor.

To import queens from Europe for the purpose of improving our bees is absolutely useless, for there are no better bees in Europe than we have here, unless we go to Norway and Sweden, where we might hope to find a hardier honey bee than we possess. To begin with, let us take our best and breed from them.

We, the bee-keepers, are not so situated that we could carry out a plan as outlined; the government could do it. It might be necessary to select a small island of our possession; in fact I favor this, as we could thus control all stock on our breeding ground.

The breeding of no other stock is associated with such difficulties as that of bees; and yet these difficulties could be surmounted with a comparatively small outlay of money.

Let us put our shoulders to the wheel and work together in unity.

Naples, N. Y., Dec. 21, 1901.

Too Much Pollen—How Can It Be Removed ?

(By G. M. Doolittle.)

A CORRESPONDENT writes as follows: "I had several colonies of bees which became queenless after swarming last summer, through lack of attention on my part, and before I was hardly aware of it the bees were so reduced in numbers that I did not think it worth while to procure queens for them and so united them with other colonies. By so doing I have quite a few combs stored away which are pretty well filled with pollen. What I wish to know is, how I can remove the same before I give the combs to the bees another season. Will you please answer this question through the columns of the American Bee-Keeper?"

Most certainly I will, with the Editor's permission; but before doing so permit me to say a few words about allowing colonies to become queenless after they have cast swarms, for, from the much correspondence I have on this subject, it would seem that hundreds, and thousands of colonies are lost each year through their owners allowing them to become queenless in this way, "through lack of attention," as our correspondent puts it.

As a rule, a colony casts its first or prime swarm upon the sealing of the first queen-cell. Seven days later the young queen in this cell emerges, and, unless the colony decides to send out after-swarms, this queen should be laying from ten to twelve days later, or about seventeen to twenty days after the prime swarm issued. If after-swarms are allowed by the colony, then this first young queen leads out an after-swarm, so that, should there be no other queen-cells which were capped over at as early a date as was the first, it may be from several hours to several days before the next queen comes out of her cell; but at the latest, the last young queen to emerge is due to come forth from her cell in sixteen days after the old queen left the hive with the prime swarm. And as this young queen will generally be laying, if she ever lays, within twelve days after she comes out of the cell, we have twenty-eight days as the maximum time for the laying of the young queen after the prime swarm issued. Therefore, the wise apiarist will know, by examination or otherwise, on the date above given, that each old colony having cast swarms has a laying queen, and if no eggs are found at this time a queen should be given that colony at once, before the bees composing the same become so old that they die of old age before the bees from the introduced queen become competent to take the management of the hive. The experienced eye can generally tell from outside indications whether the young queen from the parent colony has become lost from any reason, and, surely, an examination of the combs for eggs will tell the most inexperienced novice.

Now to the question. Did I have those combs of pollen, I should consider them worth almost, if not quite, as much as though they were filled with honey. The very best way of removing such pollen is to insert one of these combs in each hive having a prosperous colony of bees in it, in the spring; and if I had enough of these combs to go around, one to each colony, I should consider myself extremely lucky. I would put one into each hive, next to one of the outside frames of brood, which is just where the bees would put it were they gathering pollen, and the work should be done in early spring, on some warm day, before the bees procure pollen from the fields. This will save you all necessity of feeding your bees rye or wheat flour, or corn or oat meal, as many advise, and will be of more advantage to the bees, as it will give the pollen right where they wish it, and save the loss of bees which usually occurs from their going out in cool, wintery weather in search of pollen, as they are sure to do where there is a scarcity of the same in the hive in early spring. It has been recommended scores and hundreds of times that we feed our bees flour or meal in the spring to stimulate brood-rearing; but after years of experience along this line I have become satisfied that such procedure is a waste of time and material, where the bees have pollen in their hives, and causes a loss of old bees to a greater extent than that gained in young ones. Thus, it will be seen that these combs are very valuable for early brood-rearing, before pollen is plentiful in the fields.

Should the questioner be so situated that his bees can secure pollen from the fields as soon as they can fly in the spring, so that he can not use the combs to advantage as above given, the next best thing to do is to give one to each new swarm when hived. In this way the swarm is spared the trouble of searching for pollen, and can devote all of its energies to gathering honey; and in a few days it will be found that the pollen will all be turned into brood, if the hive is opened and an examination made. But should anyone desire to remove the pollen without using either of these plans, then they could either soak the combs in tepid water for a week, till the pollen in the cells becomes soft, so it could be thrown out with the extractor, or the combs could be cut out of the frames, melted up, and the frames filled with foundation. Should any one wish to do this last, it will be best to render the wax from these pollenized combs by the hot water process, otherwise not enough wax will be gotten to pay for the trouble, as the pollen in the combs will absorb all the wax, or very nearly so, where they are melted in the solar wax-extractor, or by any means of dry heat.

Borodino, N. Y., Jan. 2, 1902.

The Germ That is Killing the Market for Extracted Honey.

(By W. W. McNeal.)

IF THE reader of the American Bee-Keeper will forego his business cares for a few brief moments, I will endeavor to point out to him the germ that is killing the market for extracted honey.

That which was but a mere speck on the commercial horizon of liquid honey has developed into conditions of such magnitude that in many places the very mention of "extracted" honey invites reproach. One who has felt the

W. W. McNEAL.

public pulse carefully will recognize in the statement a cold, stern fact. All but about one-half of one per cent. of the people believe that absolutely pure extracted honey can no longer be obtained through the customary channels of trade. Producers of honey are wont to attribute this most unpleasant state of affairs in the market to the withering power of glucose in the hands of the traditional "city-mixer." He is regarded as being a most diabolically inclined person who defiles all that is good and sweet and pure in honey. Now, bad as glucose may be, the germ that is sapping the life of trade in honey finds its abiding place in unscrupulous methods of production! To people of taste and refinement the quality and general appearance of extracted honey in so many instances reflects on the producer such slovenly habits as to be in reality reprehensible.

The man who produces thin, unripe, unstrained or dirty honey, and palms it off on another is just as deserving of censure as one who puts in glucose and calls it honey. The effects are the same in both cases for both rob honey of its rightful constituents.

Every admission that extracted honey finds competition in the ordinary table syrups that are to be found on the markets, is a virtual acknowledgement that something is wanting in its true properties. The only competition comes from a syrup made of pure cane sugar, which in too many cases excels the extracted honey of commerce. This being a fact, is it any wonder that the economically-wise housekeeper often prefers to make her own "extracted" honey?

There is no dodging the fact that the producers as a class, are more largely to blame for present conditions in the markets than any one else.

Now that the unpleasantness of chasing down the purchasers has been added to the uncertainty of securing a crop of honey, the situation from the standpoint of the specialist, is a gruesome one indeed. Unless bee-keepers act in concert for the betterment of conditions there can be no substantial assurance that the pure, sweet liquid from the bees own waxen combs will not continue to be ranked with adulterated or fraudalent goods. The argument of over-production falls to the ground, for there cannot be an over-production of honey in this country; but there can be and is an over production of that which passes under the name of honey, coming straight, too, from the homes of bee-keepers. Old, rusty, disagreeable smelling cans; thin, rancid, foamy honey, with dead bees and flies and numerous dirt all combined!! Ugh! Can you eat it? Can you? I dare say that one who with wanton shame uses glucose is more laudable than these. Now, I am no friend to glucose when used as an adulterant in honey. I stand for pure, wholesome foods as firmly as any one, I believe I speak a positive truth when I say that certain producers of honey have themselves ruined the market more than any one else. Consistency is always a jewel; though one would not suppose so judging from the quality and appearance of honey, in a general way.

Flashy, high sounding claims in the label effects only create disgust for honey if the purchaser finds the quality wanting. Every phase of deception, whether it be committed in the production of honey or while one is engaged in selling it, is sure to revert to the discomfiture of the bee-keeper in particular and to the trade in general. Honesty, pure and simple, gives a wonderful smack and relish to one's honey, which he offers for sale. It gives a "flavor" to the goods that is long remembered; for the world still loves both an honest man and an honest woman!

Let us notice what bee-keepers have done for the trade in honey by the persistent use of cane sugar in the apiary. The dominent belief with the uninformed consumer of honey is that real, genuine "bees' " honey will not granulate. Comb honey being more deliberate in its tendency to sugar justifies him in this belief. When these persons become apprised of the fact that sugar syrup is used for feeding bees and then note the increased tendency of extracted honey to granulate, it is very natural for them to conclude that all extracted honey is composed largely of cane sugar syrup.

Those producers of comb honey who practice and advise taking all the honey the bees store and then in turn feed sugar syrup for the bees' consumption thus get the "game" while giving to the other man the name of adulterating his honey with store sugar. This might be called an indiscriminate use of sugar for it is so easy to get beyond the border line. Call its use a deception; call it what you will, but its effects upon the market may be read by all. Every disposition on the part of liquid honey to sugar is thus made to serve as convincing evidence of fraud. The most giltedged logic one may be able to command will often prove inadequate to the purpose of disabusing the mind of the consumer of this belief. Thus we see that bad as glucose may be, the fear of cane sugar as an adulterant is decidedly the most injurious to the sale of honey.

When the time comes that bee-keepers will exercise, in the production of extracted honey a conscientious, lovable regard for others, and when we can put upon our honey labels some easy, practical method of chemical analysis whereby the purchaser of honey can prove beyond all reasonable grounds for dispute, the absolute purity of honey, extracted honey will be put on the right road to redemption.

One should be clean in person and scrupulously clean in detail in the preparation of honey for market. One should be courteous; there should be no display of avarice or a spirit to force the sale of honey on another for the gratification of a love for money. The exercise of true Christian grace is just as essential to one's highest success in apiculture as it is at any other vocation. Only the ripest, sweetest and best honey should be put up for table consumption. It should possess that clean, fresh appetizing appearance which magnetizes people through a love for the beautiful.

These are market-building requisites inseparably connected with that kind of success which enables an educated Christian conscience to rejoice in it.

Shall we make a concerted effort to save the remnant market, and thence restore it to full strength and efficiency, according to the manner stated?

Wheelersburg, Ohio.

Mating Queens in Confinement.

VICE-PRESIDENT W. T. Flower, of the Philadelphia Bee-Keepers Association has been conducting some experiments in this line during the past summer, and although, as he says, he is not yet prepared to throw up his hat and shout "Eureka," he avers modestly that he believes he "is on the road to success." He means to carry on his experiments next season and begin earlier. He ascribes the comparative meagreness of results to the fact that he started too late. He read a paper before the bee-keepers at their last monthly meeting, in which he told briefly what he had done and exhibited a photograph of the test under which the experiment had been made. The tent was 12x10x6 feet, the frame being composed of shingling lath with a 12-inch board on edge at the base and the covering consisted of muslin and netting. Seven three frame nuclei were employed. The entrances upon the outside of the tent being covered with zinc excluders, which permitted the worker bees to take flight but retained the queens and drones. Three one-half inch holes were bored in the back end of each hive to permit the queens and drones to take their flying spells under shelter, when the mating time came around.

Mr. Flower said his investigation had shown him that the queens had all hatched and disappeared except one, and that she had undoubtedly become fertilized because she had begun laying, her progeny being dark bees, probably hybrids, what became of the other queens was a mystery, althought an explanation could be found in the presence of clusters of dead bees in the upper corners of the tent, indicating that they had died of starvation. The newly hatched queens had probably been the center of each of these groups. There was no doubt that the one queen had mated, because several leading members of the association who had been out to his apiary had examined the contrivance used for mating, and had seen the queen and her progeny and Mr. Flower was confident that another season he would be able through his recent experience to overcome the difficulties on this account. In the discussion following the reading of this paper it was suggested that strips of zinc constituting bee escapes might be inserted at intervals along the upper edges of the roof of the tent to overcome the tendency to clustering, the apparent purpose of the bees being, in ascending, to get to the outer air, and an improvement in the shape of the roof, so as to make it more conical, with an escape in the top was proposed. Altogether everyone appeared to be hopeful regarding the outlook of the experiment.

M. F. Reeve.

Rutledge, Pa., Nov. 7, 1901.

The Honey Bloom of York State.

Verner R. Wooster.

The days of spring are with us and the
fruit trees are in blossom,
There's the cherry, and the plum tree
and the pear tree straight and tall,
And the brightly blushing peach tree
with its blossom so contrasting
And the sweet bloom of the apple that
is fairest of them all.

In and out among the branches that
are loaded down with nectar,
The honey bees are flying with a feeling most elate,
And they seem to be a-saying as we listen to their humming
That the dearest place in springtime is
in old York state.

Out among the pastures where the cattle are a-feeding.

Along the lanes and roadsides beneath a summer sky;
With its white bloom full of sweetness to the honey bee a-beckoning,
Is the clover among the grass blades peeping at each passer-by.

Now soon throughout the woodland will float the breath of basswood
And the bees will, much delighted, with its nectar fill their comb;
And we'll fill our hearts with sunshine and be glad that we are living
Among the bees and blossoms of our York state home.

There are fields all white with buckwheat, we may count them from the hill top.
And breathe the bounteous fragrance that fills the dreamy air.
Covering all the back-lots there's a yellow blaze of glory,
For the goldenrod, triumphant, is reigning proudly there;

And along the many fence-rows its golden plumes are nodding,
While on its bloom the small brown bee is working with a zest.
Yes, in other places buckwheat grows and goldenrod is blooming,
But among the fields of York state is where nature does her best.

Lysander, N. Y., Dec. 30, 1901.

The greater mortality resulting from paralysis among bees in the South is accounted for by Mr. Poppleton in this way: In northern localities diseased colonies succumb during the winter, and the loss is attributed to other causes; while in warm countries the destroying agent is plainly evident. Mr. Poppleton has suffered heavy losses from paralysis in Iowa. At present he believes his apiaries to be without a single case of paralysis; a condition of affairs he has not enjoyed for twenty years.

In extracting from brood combs, says Mr. O. O. Poppleton, it is the small extractor that slings out the brood. In the hands of a careful operator, the large extractor, the baskets of which have a wide, sweeping motion, will not dislodge any brood worth mentioning.

OUR CORRESPONDENTS

SPRING FEEDING, HIVES, ETC.

Waverly, N. Y., Jan. 7, 1902.

Editor American Bee-Keeper:

Dear Sir:—The remarks on hives and stimulative feeding in your January number were quite interesting to me. Locality alters cases very much. This should be given great consideration before condemning the practice or opinions of others, or trying experiments recommended by those who live in a climate very different from those who intend to follow the advice.

Stimulative feeding was very profitable in my apiary. I prefer it to uncapping honey, as the syrup may be fed warm. In this locality a colony can be built strong enough, by stimulative feeding, to fill the surplus department with bees two weeks earlier than they would if left to build up on the nectar from spring flowers. The most trouble from spring feeding is in discontinuing when it is the most necessary. One late season, one of my colonies was found in a starving condition, May 30th; the hive was more than ordinarily strong in brood, and one more feed of a pint of syrup carried them through until clover bloomed. That colony gave me the first surplus.

The best hive for me in this locality is about Langstroth size with frames arranged the narrow way. Twelve frames 8½x12 3-4 inches inside measure, were used. This rather odd size was used with the intention of using nine frames in the center of the hive with one frame at each side filled with sections for surplus. Although the experiment was never carried out I am quite sure it would have been a success with true hanging frames, without separators; as the bees that gather the honey are not apt to enter the sides of a wide hive. Long frames are very often filled with irregular combs which are inconvenient and unprofitable in an apairy. Shallow frames may work well where the winters are mild but it would be risky to winter bees in such hives in this locality, unless there were two tiers of frames in a hive.

Truly yours,
J. H. Andre.

NOT DISCOURAGED.

Cincinnati, Ohio, Jan. 7, 1902.
Editor American Bee-Keeper:

Dear Sir:—Your Journal has arrived at our home in a red coat which means to pay. You will find your request complied with in the shape of twenty-five two-cent stamps, enclosed herein.

I have been keeping bees since last spring, but must say I have had no success as far as honey is concerned, the bees being barely able to supply themselves with winter food on account of the long drought in this section. Our fall flow came just in time to save them from starving, and they left nothing undone to fill up their empty combs. I started with two colonies. They both swarmed giving me an increase of two. I'll not let them swarm this year, I have three new hives built on the double brood chamber plan, with case of 24 sections on top. The four hives now in use will also be converted into this style giving them plenty of room to work in.

I live in a perfect paradise of flowers, but as I said before the drought ruined all, last year. I remember it's but a few years ago, I lived in the city proper. Every Sunday my steps led to the hills splendidly clad with woods of all kinds, especially honey locust. Sweet clover grows in abundance, also mustard plant, yellow clover, some basswood, also maple. Aster is what saved the bees last year, it being in splendid bloom and the weather favorable. After sweet clover the aster literally covers the hillsides with its beautiful blue and white flowers. The bees had but one and one-half days to work on honey locust; it raining continually after that until the flowers grew black and limp, but that honey! It's honey for the gods, clear as crystal and a fine flavor. Fruit bloom promised a good yield, but it did not last long. It began to snow while peach trees were in full bloom, but apples and pears assisted some to fill their empty "granaries"—made partly so by brood rearing. If the weather prophet had permitted, all bee-keepers in this section would have received more than plenty of honey, but we must be patient and hope for a better yield this year. There isn't anything more enjoyable than to roam our grand old hills in July and August, when sweet clover followed by goldenrod and other fall flowers, are in bloom. Verily in this respect Cincinnati is one of the most beautiful cities of the United States. Yes, of the world. As a traveler once assured me, he having seen the great cities of Europe and the United States, "Cincinnati is built like Constantinople, on hills and in the valley. Every time I go out in the morning I wonder and marvel at your beautiful city."

Very respectfully,
Henry Reddert,

BEE BREVITIES

Apiculture is made up of little details, and there is no other business known to the writer that will suffer as much from the neglect of little matters. J. M. Young, in Am. Bee Journal.

✦ ✦

In Colorado and many other parts of the arid west a light honey flow induces swarming, while a heavy flow stops it. The philosophy of this is not readily apparent.—Rocky Mountain Bee Journal.

✦ ✦

American Bee-Keeper to hand on exchange list. It is a well edited journal and of a different turn to Gleanings. One needs both to keep his eye well on the field.—Austral Culturist, Melbourne, Australia.

✦ ✦

Why not keep the best races of bees? The Italians are the most beautiful, profitable and gentle race in existence. Besides, it takes as much time, if not more, to work among inferior bees than it does among good ones.—Australian Bee-Keepers' Review.

After reading the literature on the subject with great care, think I am justified in saying that the bee has fuller and more complete legal protection than any other domestic animal. Why should this not be so, since, even in its wild state, untrained or directed by men, the bee is led by its very instinct to labor for the benefit of humanity? Certainly no wild animal works for men as the bee does, and no domestic animal has accomplished so much without direct harness or guidance.—Prof. H. W. Collingwood.

✦ ✦

Foul brood laws in every state should be demanded by bee-keepers. It is not necessary to wait until the disease has a strong foothold. It is much better to keep the disease out than to try to eradicate it after it has begun its work. Most commendable work has been done by the inspectors of foul brood in Canada and some of the states where foul brood had taken up its residence. Does any one doubt that it would have been economy to have been at the same expense and labor before rather than after the establishment of the disease? —American Bee Journal.

✦ ✦

We have been in the habit, of late, of laying considerable stress on location, which was right and proper; but the bee-keeper who fails to realize that seasons are not alike, and so conforms to set rules of working, expecting that the same rule will work the same results each season, if applied to the same locality, will find that success will not always follow such a course. The successful apiarist must keep an eye out for all the little and big kinks which often come up in his business, so as to turn each and everything to the best advantage.—G. M. Doolittle, in Gleanings.

✦ ✦

When snow lies to a considerable depth on the ground, I find the best plan is to keep it heaped up in front of the hive, and so make the bees voluntary prisoners. The cluster is thus kept intact, and the bees made to believe that their own "fireside" is the cosiest place in the whole world. They should never, however, be compulsorily confined. Even with snow on the ground they will at times manifest an ungovernable desire to have a flight; and when, in spite of careful precautions, they insist on this, the bee-keeper should let them have their way, as the choice is the least of two evils. Neither in this nor in any other case should "force" be applied as a remedy.—D. M. M., in British Bee-Keepers' Record.

✦ ✦

A great commotion was started in California last spring on a charge that bees carried pear-blight........If bees are so guilty how does it happen that trees blight which never had a bloom on them? Why do they blight mostly long after the blossoming period?—(which is the case here). Why do they blight badly one year and not the next? And if bees are guilty as charged, what good would it do to banish the domestic bees, when the legions of wild ones would be left to carry on their work of destruction? I am satisfied that when the whole truth is known, this unjust persecution will cease, and that every thoroughly scientific observer will take his hat off in the presence of God's busy hand-maiden, the wonderful, the useful, the necessary bee.—From Gen. Manager Secor's Fifth Annual Report of the National Bee-Keepers' Association.

The publishers of "THE AMERICAN BOY," Detroit, Mich., have secured from Will Levington Comfort, who was the youngest newspaper correspondent in the Philippines at the time of the death of General Lawton, an exciting story, based upon fact, relating the experiences of the youngest correspondent in General Lawton's army. The hero of the story was the first of the newspaper correspondents to cable to America the news of the death of General Lawton at the hands of the insurgents. By an almost superhuman effort the boy correspondent, who was with the army at the time of the shooting, made his way through the enemy's country to the cable office and flashed the news to America three hours before any of the other correspondents got possession of the cable. It was a notable achievement on the part of a boy. The story begins in the February number of "THE AMERICAN BOY."

DEPARTAMENTO DE ESPANOL.

Introduccion.

UNO de los recuerdos más agradables de los primeros pasos en la carrera ápica del que suscribe, es la temporada pasada en la preciosa Isla de Cuba, entre abejas y apicultores.

Desde entonces ha sentido siempre gran interés en el progreso apícolo de las grandes tierras que se extienden por tantos miles de millas al Sur de nuestros propios Estados Unidos de América, incluyendo á las Indias Occidentales México y las muchas Republicas de Centro y Sur America.

En muchas regiones de estas extensas tierras, existen vastos recursos apícolos por explotar, y es nuestro más serio deseo extender la circulación de "El American Bee-Keeper" en estas favorecidas regiones, estrechar el conocimiento con las oportunidades, las condiciones y el pueblo en cuyas manos el bienestar ápico del país está, asi como ayudar si es posible, al mejoramiento de nuestra querida industria en la América Latina.

La creación de un departamento en español en nuestro periódico en interés de los que solo hablan este idioma, es una prueba cuyo resultado confiamos. Su iniciativa se debe al Dr. G. Garcia Vieta de Cienfuegos, Cuba, quien no solamente contribuirá con su pluma, sino que además ha interesado al Dr. Juan Pons, que escribe en la actualidad una excelente obra en español, que editará por vez primera "El American Bee-Keeper" y que constituirá á nuestro juicio, el más valioso y moderno tratado de apicultura para los trópicos.

Tenemos firme esperanza de que hallaremos generosa correspondencia por parte de los interesados en el progreso de la agricultura de Cuba, al acceder á los ruegos de nuestro amigo y compañero Dr. Vieta.

Invitamos cordialmente á todo lector para que escriba sus propias ideas sobre cualquier asunto relacionado con los intereses de los apicultores en los trópicos.

Las colaboraciones pueden ser dirigidas, bien á esta oficina, ó bien al Dr. Vieta de Cienfuegos, cuya dirección aparece con regularidad en este departamento.

El Dr. Vieta es el agente autorizado de "El American Bee-Keeper" en Cuba, y todas las cartas dirigidas á él con material de publicación recibirán su personal atención.

Hagámos esta publicación interesante á los apicultores de la América que habla en español.

Fraternalmente de Vd.
H. E. Hill, Editor,
El American Bee-Keeper.

A NUESTROS SUSCRIPTORES DE LA AMERICA LATINA.

(Por el Dr. G. Garcia Vieta.)

CON este numero inauguramos en el American Bee Keeper una sección en español dedicada como el resto del periodico á los intereses de la Apicultura.

En los Estados Unidos de Norte América exiten siete publicaciones cuyo objeto es exclusivamente el progreso y propaganda de la ciencia Apicola, mientras que en la América Latina solo conocemos "El Apicultor Chileno" que se publicada el año pasado en Santiago de Chile, y que creemos haya desparecido de la arena periodistica.

Mientras en los Estados Unidos y en

Europa; millones de pesos están empleados en la industria apícola y cada día es mayor su florecimiento, como mayor es el consumo de la cera y de la miel de abejas, á pesar de que en esos paisas la Apicultura luch con los inconvenientes, de una corta estación de flores, inviernos crudos, ausencia de montes vírgenes cerca de los centros industriales y con la esterilidad natural de los terrenos; en Cuba, pais de primavera perenne, donde la naturaleza pródiga brinda á manos llenas inmensos tesoros de miel, la explotación de la abeja es casi nula, primitivos los sistemas empleados y relativamente escaso el nimero de personas iniciadas en los maravillosos secretos de tan remunerativa industria.

Coronel Gonzalo Garcia Vieta.

Y no se diga, que el fracaso es la causa de tal fenómeno, porque al conrario, cuantos han acometido la empresa, con suficientes conocimientos, si bien escaso capital, han visto coronados sus esfuerzos con pingues ganancias, y hasta los rusticos colmenares, de los llamados "Corchos criollos," enque á cada castra sutre la colmena el exterminio cruel y brutal de la cria, devuelven anualmente el capital invertido.

El grave error de emplear todas nuestras energias en el cultivo de la caña y del tobaco, como unicas fuentes de la Ciencia Apicola, son los motivos á que deben atribuirse el abandono de una producción tan importante y demercado universal.

Nuestro unicio propósito al contribuir á la propaganda de esta industria en nuestra patria es ensanchar en ella esta fuente de riqueza que tan pequeño capital requiere y para la que no existe el grave problema "Obrero" de la mayoria de los ramos de la Agricultura. Saludamos cordialmente á todos nuestros colegas apricultores y al mismo tiempo les rogamos encarecidamente contribuyan al mejor éxito de estat sección con cuantas noticias y trabajos crean dignos de ser conocidos.

MISTERIOS DE LA COLMENA

Guia del Apicultor Cubano.

por el

DR. JUAN B. PONS Y FONOLL

y anotada por el

DR. GONZALO G. VIETA.

PROLOGO DEL AUTOR.

El deseo de complacer á mis numerosos amigos y al mismo tiempo, el de ser util á mis compatriotas, son los unicos motivos que me han decidido á escribir esta obra, en la que están recopiladas las observaciones y experiencias de los mas eminentes apicultores del mundo, comprobadas por varios años de cuotidiana práctica, en nuestro propio Apiario.

Si el amable lector, indulgente, encuentra algun interés en la lectura de este modesto libro, será, la mayor y mas satisfactoria recompensa que pueda esperar. Juan Pons y Fonoll.

Cienfuegos, Julio 15 de 1900.

HISTORIA NATURAL DE LA ABEJA.

Capitulo I.

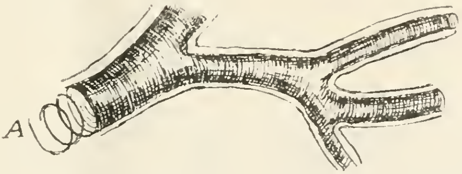
El gran Naturalista, Cuvier, agrupaba todos los animales que presentan estructura anular en una sola rama, llamada Articulados, pues están formados de anillos unidos por junturas ó articulaciones. Este término no solo se refiere á la union de dos partes sino tambien á los partes mismas. Asi las partes de las partas de un insecto como las superficies de unión se llaman junturas ó articulaciones.

Los anillos del cuerpo de estos animales forman su esqueleto, como en la abeja. La dureza de la costra es debida al depósito de una substancia dura llamada quitina, y la finueza del cuerpo de un insecto varia con la mayor ó menor cantidad de quitina. Este esqueleto distinto del de los vertebrados al cual pertenece el hombre, es exterior y asi protege el interior, formado de partes blandas, tan bien como les dá fuerza y solides al animal.

Esta estructura anular se marca perfectamente en las doradas abejas Italianas.

Clase de la Abeja.—La abeja pertenece á la clase de los Insectos, los que se caracterizan por respirar á traves de un complicado sistema de tubos de aire.

Fig I.



A Tráquea aumentada.

Estos tubos, los cuales son ramificadso y casi innumerables, son muy peculiares en su extructura.

Están compuestas de un hilo en espiral forman lo un cilindro hueco elástico y cubierto, por dentro y por fuera, de una delgada membrana. Nada hay mas sorprendente é interesante que este laberinto de pequeños tubos que pueden verse al disecar una abeja bajo el campo del microscopio. En la abeja estos tubos se ensanchan formando dos grandes sacos, parecidos á pulmones, uno en cada lado del cuerpo. Se les ha dado nombre de sacos de aire.

Subsclase de la Abeja.—La abeja pertenece á la subclase Hexápoda ó verdaderos insectos, se llaman hexápodos por tener seis patas y toman el nombre, de verdaderos insectoc por tener el cuerpo dividido en tres partes; la cabeza (Fig. II. a), la cual contiene las antenas, (Fig. II. d); ojos (Fig. II. e), y los organos de la boca; el tórax el cual sostiene las patas (Fig. II. g), y las álas, cuando existen, y finalmente el abdómen (Fig. II. c), el cual contiene las visceras y los órganos de reproducción. Los insectos sufren metamorfosis mas estrañas que los demás animales.

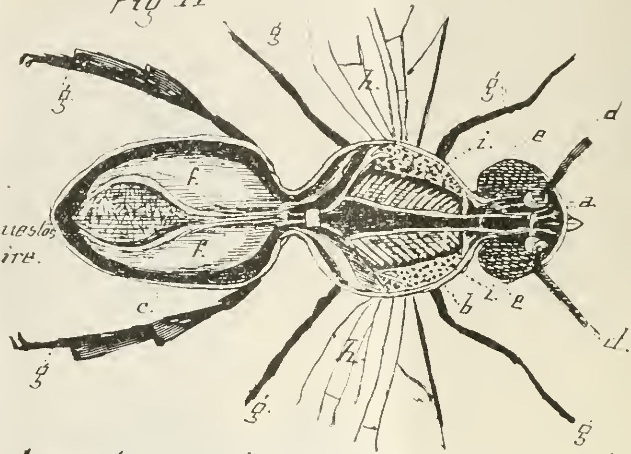
Cuando rompen el huevo adquieren la forma de un gusanó y se llaman larvas, (Fig. III. c. d. e. f.) cuya palabra significa enmascarado; luego se mantienen en estado de reposo y toman el nombre de ninfas, (g) y poco despues salen de la celda en estado perfecto con ojos compuestos, antenas y álas.

Los huevos de abejas son alargados y ovales (Fig. III. a. y. b.) ligeramente encorvados y deun color blanco azulado; untados de una substancia viscosa, en el momento de la puesta, se adhieren al fondo de las celdas y permanecen sin cambiar de forma in posicion durante 24 ó 36 horas; al cabo de este tiempo se transforma en un pequeño gusanito acostado en el fondo de la celda.

Desde este momento el gusano ó larva es nutrido con una gelatina blanquecina y transparente, segregada por las glándulas lactiferas de las obreras y sobre la cual están acostadas las larvas, á la manera que se colocan los perros para dormir; este alimento es distribuido copiosamente por las nodrizas sin que olviden de llenar una celda, anuque, el numero de larvas pase de diez ó doce millares. Depues del tercer dia, las larvas reciben uná alimentacion mas grosera, formada probablemente, de una mezcla de saliva, quilo, polen y miel todo á medio digerir por las nodrizas. Esta mezcla puede ser facilmente reconocida por el color de la larva que es mas amarilla á causa del pólen que puede verse á traves de su fina piel.

Orden de la Abeja.—La abeja pertenece al Orden de los Himenópteros (de dos palabras Griegas que significan membrana y álas). Este grupo contiene insectos que poseen una lengua para chupar y fuertes mandibulas para morder. Asi la abeja puede chupar el nectar de las flores y puede tambien roer la cera de los panales. Ademas tienen cuatro álas membranosos y supen completas transformaciones. Los Himenopteros anuque menos hermosos y atractivos por sus colores que otros insectos, sinembargo existen con un propósito y son los mejores modelos de industria que se pueden encontrar en los animales. Las abejas practican la division del trabajo; las hormigas, p. ej. practican la economia politica pues tienen un rango especial en la comunidad, la de ser soldados defensores del hermiguero.

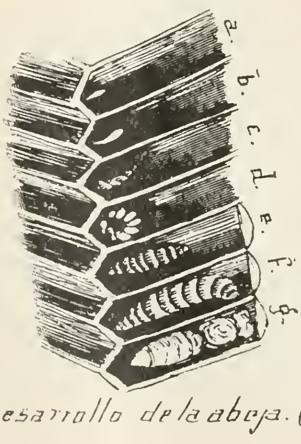
Fig II



a. cabeza.
b. tórax.
c. abdómen.
d. antenas.
e. ojos compuestos
f. sacos de aire.
g. patas
h. álas.
i. tubos de aire.

Aparato respiratorio de la abeja. (Cook.

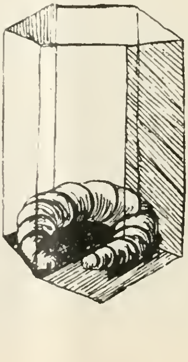
Fig III



Desarrollo de la abeja. (Duncan).

Familia de la Abeja.—La abeja pertenece á la familia de los Apidoe, la cual incluye no solo á la abeja, si que tambien todos los insectos que alimentan sus invalidas larvas con polen, miel, ó alimento digerido ó segregado por los adultos. Los insectos de esta familia poseen pelos en forma de plumas en algunas porciones del cuerpo, anchas cabezas, y antenas acodadas. las que tienen trece articulaciones en los machos y doce en las hembras. Las mandibulas son fuertes y á veces den-

Fig 4.



Apiario Excelsior, de los Sres. Landa y Pons.
(Excelsior Apiary)
Dr. J. B. Pons.
Honey House
CUBA
Vista de una de las Galerias. (View of one of the Sheds.)

tadas. La legua ó ligula, llamada, labium por algunos antores, es larga y afilada. Las segundas mandibulas ó maxilas, son largas y prominentes encubriendo la lengua hacia, otras, debajo de la cabeza. Todos los insectos de esta afamilia. tienen en las cuatro patas anteriores una espina al final de la tibia, en la cuarta articulacion de la pata desde el cuerpo, llamada espolón de la tibia. Proximamente todas las abejas tienen la primera articulacion del tarso de las patas posteriores muy anchas asi como las tibias las que estan escavadas formando un deposito ó canasto, corbiculas. Estos receptculos ó cestos de polen se encuentran solo en las abejas que recolectan mucho pólen. Larvas de esta familia son anilladas, sin patas y adelgazadas en sus extremos y como ya hemos dicho tienen su alimento preparada por los adultos ó hermanos mayores que son los que se cuidan de alimentorlos desde el estado de huevo hasta que desanollada la larva en crecimiento, tege su capullo, pues en estado de larva son completamente invalidos para alimentarse por si mismos. Todos tienen boca provista de blandos labias y debiles, mandibulas y sin duda mucha parte del alimento lo toman por la boca anuque es indudable, que absorben mucha parte á traves de su fina piel.

A esta familia pertenecen las abejas sin aguijon. Meliponas, comunes en Cuba, Mejico y la America del Sur, las que guardan y conservan la miel no solo en celdas hexagonales si que tambien en grandes reservorios de cera.

En este genero, las articulaciones de los tarsos son triangulares, son mas pequeñas, tienen solo dos celdas marginales en ves de tres en las álas anteriores y carecen del espolon tibial posterior.

(Continuará.)

EL "AMERICAN BEE-KEEPER."

Los apicultores cubanos están de enhorabuena. Nuestro querido amigo, el Coronel Gonzalo Garíca Vieta, ha conseguido que su amigo, Mr. H. E. Hill, notable apicultor, Editor de la importante revista de apicultura cuyo titulo es el que sirve de epígrafe á estas líneas, y la cual se publica en Fort Pierce, Fla., dedique una parte de su revista á los intereses apícolos de la América latina.

Mr. Hill se dedicó durante algun tiempo á la industria de las abejas en esta Isla. de la que conserva, segun propia expresión, muy gratos recuerdos, y al hacerle el Dr. Vieta la petición antes dicha, se ha prestado gustoso á complacerlo.

La parte que el "American Bee-Keeper" dedicará á la apicultura cubana, estará redactada en español, y en ella colaborarán el Dr. Vieta, tan competente en esa industria y otros apicultores entendidos.

El tratado inédito de apicultura de nuestro amigo, el doctor Pons, lo irá publicando en trozos el "American Bee-Keeper," cuya parte en castellano comenzará en el mes de Enero.

La aludida revista es, mesual y solo cuesta su suscripción cincuenta centavos al año.—La Opinion, Cienfuegos, Nov. 23, de 1901.

A LOS SUSCRITORES CUBANOS.

Tendrán Vds. ocasión de leer en "El American Bee-Keeper" la notable obra de Apicultura titulada "Guia del Apicultor Cubano" y debida á la ilustrada pluma del Dr. Juan Pons.

Dos amigos mios se han prestado con igual expontaneidad, á poner en las manos de Vds y al alcance de todos, los valiosos concocimentos teóricos y prácticos que esta obra encierra.

El primero es el editor de este periodico Mr. H. E. Hill. Sus primeros pasos en Apicultura los dió en Cuba y guarda de nuestra pátira cariñoso recuerdo. Correspondió sin vacilaciones á mis suplicas y nos presta las columnas de su periodico á todos los que á las abejas nos dedicamos.

El segundo es el Dr. Juan Pons y Fonoll. Tuve la honra de poner en sus manos el primer ahumador. Sus dotes excepcionales, su genio artístico, su laboriosidad y constancia ejemplares y su inextinguible amor por las abejas han trocado al discípulo en maestro y su obra que á continuación publicará "El American Bee-Keeper" probará á Vds. que todo elogio tributado al Dr. Juan Pons resulta pálido.

G. Garcia Vieta.

Centenares de nuestros lectores nos dicen que "El American Bee-Keeper" ha sido la causa de su éxito.

Mandaremos "El American Bee-Keeper" un año entero por solo CINCUENTA centavos Cy.

?Podremos tener el placer de enviarselo á Vd?

?Por que no une Vd. nuestro círculo de prósperos lectores y comparte la riqueza de conocimientos que circulaviárselo á Vd?

Si Vd. tiene una fotografía de su apiario, ó de otros asuntos interesantes, envienosla con una carta descriptiva pura su publicación. Estamos interesados en todo lo relacionado con abejas y su manejo.

WORSE THAN AN EARTHQUAKE.

The inmates of a certain house in Mckenzie, who rushed out on the occasion of the big shake, in attempting to escape from one form ot danger had (writes a correspondent), an unexpected experience of quite another kind. The sudden shock had overturned several hives of bees, and the infuriated insects, not being versed in seismic phenomena, evidently concluded that their discomfort was to be attributed to the refugees, who had collected in the garden. In great numbers the bees attacked everyone within reach, and though men, women and children defended themselves most vigorously, in a short time the attacking party gained a complete victory. Their opponents retired rapidly with a long list of casualties, every member of the contingent being painfully wounded in many places. Another young man, who had left home shortly before the shock, but who had ents were faring, volunteered to settle ridden back at once to see how his par- matters amicably by restoring the "status quo," and by replacing the hives on their stand. He had never been stung in his life, and had always been able to handle the bees and take the honey without any risk or precaution. But either his virtue as a bee charmer must have been dissipated by the earthquake, or the bees were not taking any conciliation or arbitration. Suddenly the hive was dropped with a bang, and the bee expert made a bee line for the open gate. By his career down the road, escorted by an attentive retinue of bees, he has established a reputation as a sprinter. The residents of the house were occupied for some considerable time, under the direction of an inspector of schools, in prosecuting a diligent search for stings, and in reflections on the uncertain temper of the "little busy bee." In the meantime the latter had turned their attention to a sheep dog, over which they gained an easy victory. The faithful animal was naturally surprised at this unprovoked assault, and was last seen on the sky line, still going strong, with a halo of bees around his head. Latest advices state that the hives are still lying prostrate.—From a recent New Zealand Newspaper.

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H. E. HILL, - EDITOR.

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Falconer, N. Y.

Articles for publication or letters exclusively for the editorial department may be addressed to
H. E. Hill,
Fort Pierce, Fla.

Subscribers receiving their paper in blue wrapper will know that their subscription expires with this number. We hope that you will not delay favoring us with a renewal.

A red wrapper on your paper indicates that you owe for your subscription. Please give the matter your early attention.

Editorial

Our esteemed contributor, Dr. G. Garcia Vieta of Cuba, whose portrait appears this month in the Spanish department, has recently been elected to congress in the new republic, thus adding another to his long list of honors in public life.

We are obliged to announce that it is impossible to write long, personal letters in reply to the scores of postal card inquiries regarding Florida which come to us. Matters relating to bee-keeping, or other information at our command, will be cheerfully given to subscribers who enclose a self-addressed envelope.

At the Ontario County (N. Y.) Bee-keepers' convention, held Dec. 12 and 13, last, at Canandaigua, we are advised by Secretary Greiner, the following officers were elected for 1902: President, H. L. Case, Canandaigua; Vice-presidents, W. F. Marks Canandaigua, C. H. Olmstead, East Bloomfield, E. H. Perry, Manchester; Treasurer, H. C. Roat, Rushville, Yates County, N. Y.; Honey Inspector, E. H. Perry; Secretary, F. Greiner, Naples.

In addition to the usual quantity of matter we begin this month the publirest, after having been treated by the McEvoy plan, for black brood, still diseased, is the report of Mr. G. F. Tubbs, Annin Creek, Pa. By way of comparison, ordinary discouragements would indeed seem insignificant. However, still greater discouragements have been met and surmounted by those who have eventually achieved success in bee-keeping.

In addition to the usual quantity of matter we begin this month the publication of a new department. While this will perhaps be of little interest to the majority of our readers, it will doubtless be appreciated by the thousands of bee-keepers in Cuba and other Spanish-speaking countries, where modern methods in apiculture are being established and pursued. It is designed herein to deal almost exclusively with problems relating to tropical bee-keeping; though such subjects as may be deemed of general interest will be given in "ambas lenguas"—both languages.

Though we have on hand a quantity of excellent material for publication, we shall be pleased to exchange a year's subscription for each available article with which our readers may favor us. Any bee-keeping subject which you yourself find of interest, will not fail to elicit the interest of others.

A Beekeepers' Association was formed in Kingston yesterday. If the Asso- land's exports of honey maintained at ciation can get the quality of the is- a high standard, it will do a world of good to the entire community. All suc- cessity to the new Society. Every bee-keeper should become a member of it. —Jamaica Daily Telegraph, Jan, 8.

Much zero weather, high winds, lots of snow and a flood thrown in are some of the things they have been having in the vicinity of Borodino, N. Y., according to a letter received from Mr. Doolittle, dated Jan. 2. Mr. D. states that had his bees been in the cellar at home, more than half of them would have been drowned, as the cellar was about half-full of water during the flood. The bee repository is situated on higher ground, hence their escape.

Why is it that bees sometimes fail to work all day on saw palmetto bloom which is loaded with secretions of nectar, was recently asked in these columns by a correspondent. Others have written to know why we failed to reply. Our reasons are the best—we don't know, nor do we know anyone that does know. It is a condition which we have observed only once, and we wrote as fully as our knowledge would permit in relation to the matter. On page 107 of TheBee-Keeper for June, 1899.

Mr. J. M. Davis, a subscriber at Spring Hill, Tenn., who is a "wholesale" queen-breeder, finds that the best results in mailing are obtained by selecting an escort of bees, as he himself puts it, "where abdomen seems to be entirely empty, and walking around with heads up and wings partly raised, apparently looking for a 'scrap' with some one." Mr. Doolittle's preference, we believe, is for the gentle little fellow with head in a cell of unsealed honey and wings snugly folded. Bless that little comforter—"locality." (?)

We note that there are several hundred subscriptions on our list which expire with the February and March numbers. We sincerely trust that every one of these esteemed patrons will have found The Bee-Keeper a profitable investment, and that we may be favored with prompt renewals.

Let every present subscriber who can conscientiously do so speak a favorable word for The Bee-Keeper to those who are not subscribers; let each freely ask for as many sample copies as he can judiciously distribute. We shall always endeavor to reciprocate any courtesies thus kindly shown us.

"MANUFACTURED COMB HONEY."

The "manufactured comb honey" canard which has been stalking up and down in the land since 1883 is evidently yet considered a crisp news item by the newspapers. The evil has been greatly augmented by the publicity given it also through the agricultural press, since statements emanating from this source, relating to agricultural questions and allied subjects, are usually considered as authoritative and carry weight. It behooves every one interested in the process of honey production to assist in showing up the absolute falsehood of the statement that comb honey is manufactured, and where ever it appears to secure, if possible, a public retraction. Any honest editor, after being assured of his error, will cheerfully make amends. So firmly rooted has the fabrication become, however, that it is difficult sometimes to convince even the newspaper editor that comb honey never has and never can be manufactured. There is also another class of editors with whom we have to deal—their numbers are few, let us be thankful—who assume to have personal knowledge of the existence of such spurious products, and are therefore unwilling to be instructed on the subject. We have on several occasions, when endeavoring to impart the real truth of the matter, succeeded in eliciting only the sympathy of our misinformed enemy.

Some of the newspaper comments on the subject have been very pointed, and evidently calculated to convince readers that the author knew very well what he was talking about. Heretofore, however, we believe, reporters and editors have failed to indicate the exact location of any establishment plying the nefarious trade of manufacturing comb honey, nearer than to name some county of Pennsylvania or other state as the home of the wicked industry. Seemingly emboldened by the smooth sailing which the moss-grown falsehood has had in the past, we learn from a recent number of Gleanings, one has now specifically charged members of the well-known A. I. Root Company, of Medina, Ohio, with producing the bogus article in question; and as a result the enterprising newspaper will have to answer in court to a charge of criminal libel which the Root people have entered.

There is no doubt that in this case the offending publication would gladly make amends, by publishing a retraction—a thing which all have not willingly done in the past—but in this particular instance the publisher, it appears, has been a trifle too pointed to admit of so easy an escape from the merited reward. The A. I. Root Co. has determined upon affording an object lesson; and it is well that it should be even so. There seems to be no shorter road to the bee-keepers' deliverance from the evil which this same hoary, yet nimble lie has spread about them. It is, furthermore, a "wholesome thought" that the specific charge should have been brought against a firm whose bank account and clean business record renders the case so easily handled.

ANOTHER CO-OPERATIVE ASSOCIATION.

The depressed condition of the Jamaican honey market and the unequal division of the gross proceeds from the English markets, which leaves but little for the producer, have conspired to thoroughly arouse the apicultural leaders of the Island. One meeting was held in December, at Kingston, as a result of which a strong circular letter was circulated among the bee-keepers of the country, setting forth the necessity for immediate and decisive action, and appealing to them to meet Jan. 7th, to take steps toward the organization of a co-operative association. The following extracts from the circular, besides acquainting the reader with the situation which there prevails, may contain a suggestion of value otherwise:

> The times are ripe for the effort, and if we will all pull together we can place our beloved pursuit on a solid and profitable basis. A bee-keeper showed me the returns for 10 cases of well ripened, logwood honey, equalling 80 gallons. His net returns after deducting all expenses outside his apiary was about 9d. per gallon! My brethren, these things ought not so to be. It is a shame that the producer of such a finished product of Nature should make the smallest profit of all who handle the crop between producer and consumer, but under present methods it is bound to continue. The only way is to eliminate the middleman, and get the crop

into the hands of the retailer with the least possible handling and expense. This an association on co-operative lines could do by grading and putting up our honey here—putting it up in small tins holding one, two, three, or more pounds as may be deemed best, just as beef and fruits, etc., are put up, so the retailer can handle them without messing up himself or shop, let these tins have attractive labels, setting forth the source of the honey, and the guarantee of the association as to its quality and purity, and with instructions as to how to readily liquefy if so desired, etc.

Then we would want to put a competent traveling man to work in England to dispose of our crop to the retailers direct, on commission, so that the more he sold the more he would earn. We could also clarify the wax of the members, and put in uniform cakes with the stamp of the association and thus get better prices than by old methods.

Honey in small 1 pound tins retails in England for 1s. a pound, and the demand is—limited. Yes, of course it is, and always will be at such prices!

Suppose we sell it at a price, say 7 1-2d. per pound, that will net the producer 3d. per pound, or thereabouts, or say 3s. per gallon. I am sure this would satisfy any of us. This of course for well ripened table honeys, the darker we could not expect to get very high prices for, as it would only be used for manufacturing purposes, but even for this we could make contracts direct with the consumers, and thus save middlemen's profit. This, in short, is the proposed scheme, subject to alteration as may be desired.

H. G. Burnet, Cor. Secy.
C. W. McHardy, Asst. Secy.
145 Harbour Street, Kingston.

Literary Notes.

CABINETS AND CABINET-MAKING.

The gradual reconstruction of Mr. Roosevelt's Cabinet lends a direct and timely interest to an article which the Hon. Charles Emory Smith has just written for The Saturday Evening Post, of Philadelphia.

Cabinets and Cabinet-Making tells how Presidents choose their official advisers; how nice political considerations influence their choice and reduce to lowest terms the number of available candidates.

This article will appear in an early issue of The Saturday Evening Post.

"I Will Not Forsake Thee" a sacred solo by H. W. Petrie, published in the January number of the J. W. Pepper Piano Music Magazine, is alone worth the price to all those who appreciate good music wedded to appropriate words. Nothing better has ever appeared in its pages. The magazine also includes 22 pages of entertaining musical literature and half tones, 21 complete pieces for the piano—10 songs, 11 instrumental—25 cents. For sale by all newsdealers.

NOTABLE ARTICLES.

Modern Culture for January contains a notable paper on "Henry George, the Man and the Reformer," by Dean Charles D. Williams, D. D., of Trinity Cathedral, Cleveland; seven timely illustrated articles of which those on "The Police Dogs of Ghent," by J. E. Whitby, of Brussels; "Winter Navigation on the Lakes," by W. Frank McClure, of Ohio; "The Sun God in Chains," an account of the newly invented solar motor, by Arthur Inkersley, of California, and "The Charleston Exposition," by Dolly K. Yancey, of Charleston, are of especially fresh interest; a graceful poem on "Winter," by Hortense Tousley; and a longer and more serious poem on "Bysantium," author unknown, which is presented to Modern Culture readers as "A Literary Curiosity," by General H. G. Gibson, of Washington. There are besides a number of literary articles, a story of Mormondom in the "seventies," "The Vengeance of the Lord," by H. B. Sterling, and the usual interesting departments.

If the old saying, "All the world loves a lover," is true, then the fiction in The Cosmopolitan for January should be popular, indeed. All the stories vary in treatment, plot and action, from Frances Courtenay Baylor's charming story, "Cupid's Practical Joke," to Maarten Maarten's strong domestic tragedy, "Her Father's Wife," but all have love for a central theme.

HONEY AND BEESWAX MARKET.

Kansas City, Mo., Jan. 8.—Demand for honey is fair with good supply. We quote comb honey, 12 1-2 to 14 cents; extracted, 6 to 7 cents. The supply of beeswax is light at 30 cents per pound.

Hamblin & Sappington.

Boston, Jan. 4.—Comb honey is in good supply and not working off as well as would like to see it at this season. Prices are ranging as follows: Strictly No. 1, 15 to 15 1-2 cents; No. 2 14 cents; extracted, white, 7 to 7 1-2 cents; light amber, 6 1-2 cents.

Blake, Scott & Lee.

New York, Dec. 9.—The comb honey market is in about the same condition as our last advices, there being a good demand with enough receipts arriving to take care of all business. We quote as follows: Fancy white, per pound, 15c; No. 1, white, 14c; No. 2, white, 12 to 13c; Buckwheat, 10 to 11c.

Francis H. Leggett & Co.

Buffalo, Dec. 7.—Demand for comb honey is moderate, with moderate supply; dark, very quiet at 8 to 12c, as to grade. Fancy, selling fairly well. We quote: Fancy comb, 15c; extracted, fancy, 5 1-2 to 6c per pound. Beeswax is in good demand with light supply, at 28 to 30c. Dark, etc., 20 to 25c.

Batterson & Co.

Chicago, Nov. 13.—The market is easier in tone, while prices are nominally the same, but would be shaded to effect sales. Some cars of honey en route to eastern cities have been diverted to this and surrounding points, which is having a depressing effect.

Comb brings 14 to 15 cents for best grades of white, and light amber, 12 to 13 cents; dark grades, 10 to 11 cents; extracted white 5 1-2 to 6 1-2 cents, according to quality, flavor and package; light amber 5 1-4 to 5 3-4; amber and dark, 5 to 5 1-4. Beeswax, 28 cents.

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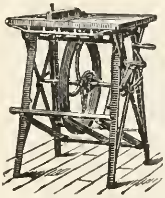

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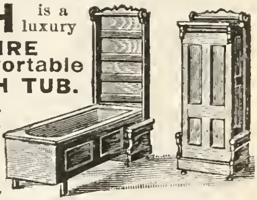

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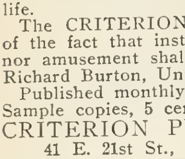

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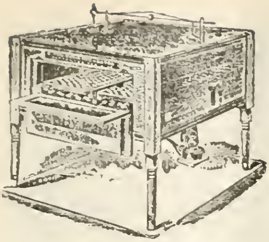

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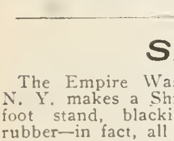

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THE AMERICAN BEE-KEEPER

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WINTER DREAMS.

Deep lies the snow on wood and fields,
Gray stretches overhead the sky;
The streams, their lips of laughter sealed,
In silence wander slowly by.

Earth slumbers, and her dreams—who knows
But they may sometimes be like ours?—
Lyrics of spring in winter's prose
That sing of buds and leaves and flowers.

Dreams of that day when from the south
Comes April, as at first she came,
To hold the bare twig to her mouth
And blow it into fragrant flame.

—Frank Dempster Sherman in the February Atlantic.

FOUNDATION.

HOW MUCH SHALL WE USE IN OUR SECTIONS?

(By G. M. Doolittle.)

"HOW MUCH thin comb foundation shall I use in the section boxes this year?" is a question which often comes up to the bee-keeper when he is preparing for the coming honey season. And as the time for preparing for next season is now upon us, I thought that a few words on this subpect might not be amiss.

How we answer this question will depend quite largely upon two things. The first, and it seems to me the most important is, have we the necessary means to indulge in all the foundation which will be needed to fill our sections, without depriving ourselves or some of the family of the necessities or comforts of life? If we have not, then my way would be to use triangular starters, the same having each of the three sides about two inches long, in three-fourths of the sections I was to use; and when the season opens, put in starters of white new comb, which it is always easy to find or procure during fruit-bloom in almost any apiary, in the remaining sections.

To get the triangular starters, cut the thin foundation into strips a little less than two inches wide, then turn the cutting knife at an angle across this strip each cut, thus giving the desired shaped piece. And to get the white comb, remove a frame of honey from each populous colony, and put in a frame having a foundation starter in it, about half an inch wide, and every two days remove what comb the bees may have built in it. Cut this comb up in the desired pieces and attach one to the top of each section by drawing a hot iron between it and the top of the section, the section being bottom side up, when by setting the piece of comb down on the section wood at the same time the iron is removed it will become a fixture. I know of nothing which will entice bees into sections so quickly as will new comb of the same season's building. In this way we are apt to secure even a better yield of honey than by any other plan, especially if the sections containing the starters of comb are scattered uniformly among those having the foundation starters. The only drawback when so working will be that the sections will not contain all worker comb, or present quite as fine an appearance, nor the combs be attached to the wood of the sections quite so firmly, as where the foundation in full sheets is used; still, very little difference will be made in the selling price for lack of the full sheets of foundation, Again, if I thought it best to hive my new swarms on frames filled with foundation, so that wired frames filled with worker combs would be a certain result, which is a thing greatly to be coveted, then I would use only starters in the sections as above.

When a prime swarm issues, they go forth, as a rule, with wax already secreted in their wax-pockets, so that they may at once commence to build combs in their new home, and if the new home is already supplied with all the necessary combs this wax is wasted, or, what is often the case, worse than wasted, it being added to the foundation already in the sections, so that, instead of drawing out the side walls of the foundation they build with their own wax the cells of the combs, thus leaving the foundation in the sections-the same as it left the mill. This causes the grumbling we have heard so much about, regarding the "fishbone" in section honey. Now, where I hive swarms on full combs, or frames filled with foundation, I use only starters in the sections, and find that the bees will build the combs in the sections while they are drawing out the foundation below, and thus a saving is made. But, as a rule, unless we are very short in the family, I prefer to fill the sections with foundation, that I may have handsome salable sections of honey, and use only starters of foundation in the frames below, having the starters in the frames, say from one to one and one-half inches wide. By contracting the brood chamber to so few frames that a part of the swarm is forced at once into the sections, the bees go to work there storing honey and drawing out the foundation, while during the same time they build all straight worker comb in the frames, so that by the time the frames below are filled with comb and brood the sections will be nearly completed also. In this way there is no detraction from the amount of section honey, so far as I can see; and we have worker combs built that are nearly or quite as perfect as those from foundation.

Borodino, N. Y., Jan. 30, 1902.

The Ethical Side in Apiculture.

(By Bessie L. Putnam.)

ONE OF the most impressive features of bee journalism is the geniality and good will of the guild. While there are bright sallies of wit, they are almost always of the good-humored class which leaves no sting. Criticisms, differences of opinion there may be, but rarely of a caustic nature. Rivalry there may be,—to produce the largest yield, the best honey; but not to injure the trade of another. There is a mutual feeling of sympathy and interest. The pleasures of one are shared by all; a misfortune sheds its shadow of depression throughout the apiary world.

A pleasant illustration of this widespread bond of friendliness came recently on the occasion of the marriage of the "Hutchinson twins;" and the event was recorded with scarcely less personal interest by the various exchanges than by the Bee-Keepers' Review, in the sanctum of which it had so much of significance. It is safe to say that from almost every home in the land where a bee journal is read have gone forth, mentally, the best of wishes to the two new homes.

Old-time contributors have given through the various mediums not only valued experiences but glimpses of their own personality. And it is one in which kindliness, gentleness, and patience are dominant characteristics.

So wide spread are these traits that we feel impelled to seek a more explicit explanation than mere co-incidence. There is a natural sequence in all things; and if we but analyze the qualities which make the good apiarist, contemplate the phases developed by his thoughtful life, it is not difficult to understand why he is also a good citizen.

Systematic study of his little charges, patience, punctuality, neatness, gentleness are indispensable. Routine work may apparently succeed for a time; but the perplexities and emergencies sure to come up sooner or later call forth originality of thought and a thorough understanding of the habits of bees.

Did you ever see a really successful bee-keeper, who was not something of an enthusiast over his pets? Who did not enjoy working with them? To him their methods of house-keeping, brood rearing, and the gathering of supplies have an interest higher than that of pure mercenary gain. The construction of the cell, the "bee line" to and from the distant clover field, the evident recognition of strangers, these and many other traits point to a higher order of intelligence than is usually accorded to insect life. While much has been written about them, there are volumes yet to be learned. Surprising incidents are of frequent occurrence if we but note them. Those who know the bee understand that it goes not about seeking whom it may sting, but simply attends to its own business and bravely resents the intrusion of others.

Careful study of the bee increases our interest in it, our respect for it. And the awakening of love and kindliness toward the lowest of God's creatures naturally extends to His masterpiece,—man.

Harmonsburg, Pa., Dec. 23, 1901.

Feeding Bees—Candy Plan a Failure.

(By W. T. Stephenson.)

THE TIME for winter (or spring feeding) will soon be here. A few hints dropped in the right place might save some one a good deal.

I was once rather indifferent in regard to giving my colonies the required amount of feed in the fall. That, however, was a very poor and impractical policy. I had heard so much about the candy plan of feeding that I rather wanted the condition of my bees to be such that I would be compelled to resort to candy for stores. Well, two years ago I fully satisfied my "cranky" curiosity. I found my bees perfectly destitute in February. I at once laid in a supply of sugar, which in due time was made into candy. I already could hear (in my mind's ear) the bees singing my praises for delivering them from starvation's clutches.

I made my candy according to the common method of making hard candy, viz.: Put the sugar and a little water into a vessel and let it boil until when a little is cooled in a spoon it makes a thick syrup. Then as it cools, I stir it to make it white and hard. I molded it in to six-inch squares about an inch thick. One of these I laid over the cluster in each hive. As long as the weather was moderately cold the candy furnished ample provisions; but, alas, a cold "snap" came, the cluster contracted and left the candy and starved.

I had so much confidence in the plan that I did not pay much attention to them until I saw that the grim reaper had reaped a good part of my apiarian populace. There was but one redeeming feature in the whole transaction. I had lots of candy to eat.

W. T. STEPHENSON.

Well, I'll never feed any more candy unless it is in summer in queen cages. The weather never gets too cold to feed sugar syrup. Let the syrup barely come to a boil, and before it is entirely cold (perhaps better say while it is quite warm to experienced bee-keepers) pour into a warm comb through a perforated bottomed can. But if you have some candy ready made it can be fed with a reasonable amount of safety in this way: Spread the frames about an inch apart, lay the candy on the frames immediately over the cluster. Tuck a chaff cushion over them snugly and if the weather is not too severe, and the colony strong enough, they may pull through.

New Columbia, Ill., Jan. 31, 1902.

PHILADELPHIA.

DOINGS OF BEE-KEEPERS IN AND ABOUT THE CITY OF BROTHERLY LOVE.

(By M. F. Reeve.)

THE PHILADELPHIA Bee-Keepers' Association, which claims to be the oldest organization of apiarists in the United States, celebrated its twentieth anniversary in January, by re-electing president and librarian, Dr. Harry Townsend; vice-president, W. E. Flower, and treasurer-secretary, Fred Hahman. President Townsend in his address said the only meeting the association had ever missed was during the blizzard in March, 1888. The Association has 25 active members, and a small balance in the treasury. It was announced that in view of the size of the quarters, a much larger membership was not desired. Among the contributors are bee-keepers of several counties around Philadelphia, and points in New Jersey. During the spring, summer and autumn months, the society has regular "outings," or field meetings at out of town apiaries, which are delightfully al fresco affairs. The topic for the February meeting was an "Improved Method of Queen Rearing," by Dr. C. J. Massinger, Collingswood, N. J., whose invention of a spiral queen cage, I referred to several months ago in connection with an account of the outing at the Hanor Apiary at Mt. Holly, N. J.

The Pennsylvania bee-keepers outside of Philadelphia, are talking about organizing a State Association for the principal purpose of securing foul brood legislation. They are scared by the reports of the appearance of the disease among the colonies in localities adjacent to the boundary line. The organization will be effected before the next legislature assembles.

The New Jersey State Bee-Keepers' Association having the same object in view, to-wit: the fighting of foul brood, and the appointment of state inspectors, has already been organized, with B. F. Onderdonk, Mt. Vernon, president; W. W. Case, Baptisttown, vice-president, and secretary-treasurer, G. W. Wansor, Crawford. The New Jersey State Board of Agriculture has given its endorsement and backing to the objects of the Association and the bill will be introduced into the legislature.

Rutledge, Pa., Feb. 10, 1902.

Box Hives and Transferring

(By W. W. McNeal.)

TO THE beginner in apiculture, the old-time box-hive is without a doubt the best hive extant. To the veteran bee-keeper the box-hive is, in many places more deserving of recognition than some styles of frame hives when same are used with a view to establishing a colony. Consequently one of the greatest mistakes the inexperienced man or woman can make is to transfer the bees and combs of a big box-hive to a frame hive. Can you name any other hive in which a colony of bees will winter so successfully when correspondingly neglected by its owner? I think not. So again I say to the beginner: Let your first purchase of hives of bees be box-hives. I see no reason why a colony should ever be transferred from one of these hives if the hive is made of good, sound boards, and the combs are straight and do not consist too largely of drone comb. The only time I should consider such a course would be when wishing to quit the business and I could not dispose of the colony at its real value. You may say that I am away behind the times for advocating the use of a hive in which the combs are not movable. However, I believe I am right in this matter as stated. I do not condemn the use of frame hives. On the contrary, I much prefer certain styles of movable comb hives to box-hives for a general purpose hive. But of what avail is the improved hive when the box-hive system of management is tacked to it? None whatever. In fact, it then becomes the worst hive in which bees can be put. When intelligently manipulated it possesses certain marked advantages over box-hives. As a rule the novice will not make a right use of the hive. It is all right and proper for him to experiment, to study the habits of bees by working with them; but he should confine his researches to the dividends (of bees) accruing from his first investment. Why should he be told that first he must break up that big, strong colony and crowd its combs into a little frame hive, making anything but a success of the job? If let alone it will in all likelihood send forth a big swarm every year very early in the season; then if the young bee-keeper succeeds in tinkering to death his first swarm and possibly his second and third also, he still has his principle—the parent hives—to fall back upon. This is the kind of transferring I recommend for the consideration of the beginner.

We cannot get big crops of honey unless we have big colonies of bees. Every one who has had experience with bees will, I think, be willing to concede this point. But the strangest part about the matter is, that almost with one accord, bee-keepers denounce the hive which gives the best results in bees for gathering the early harvest. How often we see these box-hives standing in some out-of-the-way place, wholly exposed to the vicissitudes of the weather, presenting a hopelessness that breeds a sickening sense of discouragement in the mind and heart of the enthusiast; yet when the warm, sunny days come again these big hives literally boil over with bees. What a delight it is to the veteran to make a "drive" from such at the commencement of the honey harvest, hiving the swarm in a properly adjusted frame-hive! Then when the season is over, the swarms may be taken up or returned to the parent hives, thus reaping the benefits without the loss of the old colony. Or, if one wishes to keep the swarm he may by using full sheets of comb foundation in the brood frames, establish the swarm very quickly. Let us not condemn the box-hive too severely, for in the one purpose of wintering a colony of bees it possesses advantages over the orthodox frame hives, which cannot be disputed.

Wheelersburg, O., Feb. 5, 1902.

A man feels like a boy again when he imprisons a bee in a trumpet flower; but he knows he is the same old fool when the insect gets in its work.

OPPORTUNITIES.

ARE WE NOT MISSING SOME WHICH OUR BUSINESS AFFORD?

(By John M. Rankin.)

OUR ANCESTORS who tilled the soil worried but little about its fertility. All that was necessary to secure a crop was to rid the land of the timber, sow the seed, and the harvest came as certain as did the autumn. That time has passed. The forest no longer stands in the way of the plow, but the available plant food is limited. The agriculturist must study conditions and solutions of unfavorable conditions. So it is with the apiarist.

The time has passed when a colony of bees in a soap box or a nail keg is a profitable colony. There is no demand for the product of a colony under such conditions. Owing to the present prices of other sweets honey has ceased to be a necessity and has become a luxury. The condition, therefore, must be such that it will be possible for a colony to produce an article that will be in demand by the class of people who consume luxuries. Hence the nail keg and soap box, so far as practical purposes are concerned, are bee hives of the past. The world is today making more rapid progress than at any previous period, and the honey industry must also progress or be outdone in the race.

How is this to be accomplished? In the first place, we, as apiarists, must use all the intelligence that we have, and do our duty toward ourselves and our profession by keeping informed, and then having done this to put our ideas into practice, and, under our circumstances, do the best we can.

How many of us who are practical apiarists do our duty by ourselves in regard to the former? Do we keep in touch with all the modern ideas, carefully turn them over in our minds, and then give the seemingly practical ones a fair trial? Do we read carefully the article written by some before unheard-of man, and give it the weight and thought it deserves? Many of these articles contain points, although probably not well brought out, that are of prime importance. Then, what is of more consequence; do we always do the

JOHN M. RANKIN.

best we can? Do we always put into practice all the ideas that we know will make our business more profitable; repair the leaky cover before the sections in the upper surplus case become soiled, or take out the queen whose stock you know to be inferior honey gatherers, as compared with that of another colony?

In order to make the best success possible we must read wide, and determine in our own minds what is and what is not practical. We must arouse our energies and undertake our work with an invincible zeal that knows no outcome but success. This is true not only of the specialist, but of the apiarist, who keeps his bees as a side issue. He must put away the whimsical ideas of his ancestors and adopt plans that will meet the needs of his time.

Then, last, but by no means least, he must shield himself from that enemy of all prosperity—neglect. It is certainly appalling to see, not the ignorance, but the indifference that some men display in this line. The most prolific cause of the spread of foul brood is simply neglect. In conclusion, let me leave this one thought with you; no matter if your apiary consists of but one colony, know something definite about that colony, and then use this knowledge in such a way that you will assist this colony in becoming a profitable investment.

Agricultural College, Mich., Feb. 10, 1902.

Laying Workers.

(By Arthur C. Miller.)

IN LOOKING over the January Bee-Keeper for a hint as to a suitable topic for this article, I ran across the letter of Mr. Geo. H. Mobley and noted his queries about "laying workers." As I have made quite a study of that subject, perhaps I may be able to enlighten him and also interest others.

"Laying workers" are developed from mature and previously normal workers, the development taking place when the bees are in dire need of a mother, and when they have no eggs or brood from which to rear one. But there appears to be an exception to the statement in regard to having eggs or brood, for sometimes laying workers make their appearance in colonies having brood in advanced stages. We have not as yet any exact record of the physical changes in such bees. We know what constitutes a normal worker and what a laying worker, but of the transition stages I believe only little is known. Also but little is known as to what properties in the food and what "mental or "nervous" states may serve as stimulants to produce activity of the ovaries. Special foods are prepared and given to larvae destined for queens, and these foods particularly stimulate the development of the ovaries and associated parts. It is probable that mature worker bees in dire need of a queen, and producing such elaborated food, get it from each other as there is no brood to receive it, and thereby have their ovaries particularly stimulated, and as the eggs develop, proceed to lay them.

In connection with the remarks on food, I wish to ask attention to the probable fact that under normal conditions bees seldom get chyle or digested food from each other (except as above stated). I am not absolutely sure on this point, but thus far all evidence tends to confirm such belief. Foods and food influence in bee life are interesting problems and are deserving of more attention than has previously been accorded them, but they are subjects beyond the ken of most of us, and must be left for the scientist to investigate.

Let any bee-keeper who wishes to satisfy himself that laying workers arise from mature normal workers and not from larva having a bit of "royal food," try the following experiment:

Move to a new stand any fair colony having a young queen which has been with them for at least two months. Provide for the old bees returning to the old location as may be most convenient; they concern the experiment only in that they are not wanted in the moved colony. In ten days or more take the queen and all the brood and eggs away from the moved colony, leaving only the bees, to which give combs of honey and pollen. To be absolutely sure no eggs are given these, combs should have been away from the bees for several days—weeks would be better. Now watch for results. Ordinarily in four or five days a few eggs will appear and the number will increase daily until the colony begins to decline. The reason for selecting a colony having a young queen and for getting rid of the old bees, is to be certain that all bees subjected to the experiment are raised under such conditions that there can be no likelihood of any of them receiving "royal food" while in the larval stage.

The answer to Mr. Mobley's second question is not so easy. If the queenless colonies have eggs and brood, the conditions are not such as to create the abnormal desire or to cause or enable workers to get the special foods. On the other hand, if all the bees are very old, it may be impossible for any change to occur in their ovaries, but I can only judge this by analogy.

To his third question, "Why will a queenless colony fail to produce a good queen when only supplied with a few eggs?" I will answer Yankee fashion —Is such the case?

Providence, R. I., Jan 31, 1902.

A Few Current Thoughts.

(By Adrian Getaz.)

I HAVE nothing to contribute this month to the foreign department. Not that there is nothing in the bee papers published in the French language, far from it. But most of it is of a local character and would be of little interest to American readers. Quite a number of interesting items have been published time and again in different papers on both sides of the "pond," and do not seem to me worth repeating again. To make matters worse, two of the best correspondents of the Revue internationale have been seriously sick during the last four months. But both have recovered and will soon be at work again.

HIVES AND "RUCHERS."

Some time ago I spoke of "ruchers," that is, a kind of bee shed or house apiary very much in use in Europe. In looking over the matter, I came to the conclusion that our present system of hives and apiaries is in great need of improvement.

What is the ideal home of a bee? What home has Nature provided?

A hole or cavity in a dead tree. Away up in the air. Away from the damp earth, from the ants, the lizzards, the frogs, and other "varmints." Away from the other colonies, from robbers and thieves of all sorts and kinds (apiarists included). Protected from the hot sun by the foliage of the neighboring trees. Protected from the cold by the thickness of the wood. Note also that rotten wood is about as bad a conductor of heat (or cold) as cork and furthermore absorbs all the dampness that may arise. In a dead tree there is no difference of temperature between day and night: that is, the most favorable condition for brood rearing and comb building.

What home do we provide? A thin box right on the ground; exposed to the hot sun, the cold nights, the rain, snow, winds, "varmints," etc.

Then we discourse learnedly (?) upon the necessity of following Nature's ways!

FEEDERS.

During the first period of modern bee-keeping, all sorts of hives were devised. Some were very pretty. Just like a nice country house, with doors and windows, and often a drawer under the entrance board, said drawer to contain pieces of comb, lumps of sugar, or whatever the apiarist would feed his bees with.

That drawer might not be a bad affair, if properly arranged. To begin with, it should open at the back of the hive instead of the front. Then the entrance to the drawer from inside, be so arranged, that the dirt and other debris could not fall in. The possibility of the apparatus being propolized and stuck should be considered. The feeder should be arranged like the Heddon or Miller feeder, or something similar, so the bees would not be drowned, or bother the apiarist when refilling. The whole should be robber-tight, of course. It might be large enough to contain several extracting combs when these need cleaning.

Feeding on the top of the hive is objectionable on account of the loss of heat. The space occupied by the feeder takes heat which would be better in the supers and brood nest. In opening the hives, a great loss of heat takes place. If the feeder is such as to be refilled without being bothered by the bees, the same arrangement prevents resealing of the cover; and the warm air of the colony constantly escapes through the cracks between the cover and body of the hive.

Feeding outside will not do. The colonies that need the most get the least, and those needing the least get the most. More or less bees get drowned. The neighbor's bees may get a share. Whatever little nectar is in the field is lost, for it is the field bees which take the feed. It teaches the bees to rob. After a bee has taken feed from an outside feeder or robbed a few times, she will be on the watch all the time for more and as soon as anything sweet is exposed, she will quit the field work and go for it. Some will eventually discover that when the apiarist is at work there is a chance to rob; and get in the habit of following him around, buzzing around his head all the time.

The entrance feeders do not quite fill the bill. They are too small, have to be filled late at night. And if the night is cool, they may not be emptied when the morning comes. Then, look out for the robbers.

EXTRACTORS.

A firm advertises extractors run or rather geared at a very high speed, claiming that the honey is so well thrown out that no cleaning by the bees is necessary. My own extractor is home-made, and geared to a higher speed than those made by the factories. I use it chiefly to empty partially filled sections. At first I broke a good many. Now, I empty both sides at a low speed, first: then when most of the honey and therefore the weight is thus removed, I can use full speed without breaking the combs.

Knoxville, Tenn., Feb. 14., 1902.

My Apiary.

Of all the sunny charms of home, within and without,
Amid blossoms of trees and odors of sweet peas,
To me the bower of Eden, on earth, no doubt,
Is close around the old hive, sweet home of the bees,
Home, home, sweet home of the bees.

As I sit me down in my bower of beauty,
Wakeful of thought, under the trees, among the bees,
And musing of life, of prompt action, and duty,
I learn from this hive the rejection of all ease;
Busy, busy, busy bees.

There are charms of music, in church, parlor and hall,
Music in the grove, of the bees among the trees,
And the birds singing sweetly, more sweetly than all:
But melody richest, the humming of the bees,
Humming, humming, of the bees.

Powers and kingdoms are covering all the zones,
Dispensing law on land and sea, for you and me:
But the hive of state, the killing off the drones,
Is the example only of the plucky bee;
Ruling, fighting, plucky bee.

There are treasures of soil and treasures of money,
Diamonds come over the seas, and fruits from the trees;
But what is more precious than harvests of honey—
The nectar of flowers, the sweet gift of the bees;
Oh, for honey, trees and bees.

—C. M. Herring.

Brunswick, Maine.

The initial number of the Lone Star Apiarist, the new journal which claims the distinction of being the "only bee paper in the South," has made its appearance. It is published at Floresville, Texas; edited by Louis Scholl; contains 24 pages, and is evidently in the hands of experienced bee-keepers. As the honor of its publication is therein accredited to Mr. Frank M. Jones, and also to the Lone Star Apiarist Publishing Company, we cannot be sure upon this point. The new paper thoughtfully takes occasion to present to its readers the portraits of the three gentlemen who comprise the firm—Messrs. G. F. Davidson, Frank M. Jones and Louis Scholl—three very good-looking men. We wish the Apiarist a long and successful career; and trust it may become a power for good in that far-off country (?)—the South—in which it recognizes no competition.

JOSEPH JEFFERSON IS A "SUNSHINER."

The Purina Mills branch of the International Sunshine Society in St. Louis has the honor of numbering among its members the famous actor, Joe Jefferson, says the president of the society in the February Ladies' Home Journal. The last time Mr. Jefferson was in St. Louis he was asked to address this branch at one of its monthly receptions. When he had seen and talked with the Sunshiners he became deeply interested in the work, and before he left the reception his signature was added to the list of members. Just how he paid the dues—one kind deed—is not told.

If we only knew of the heartaches of others, how averse we would be to add to their sorrow by an unkind word or adverse criticism!

THE Bee-Keeping World

GERMANY.

UNITING BEES.

Mulot says in "Die Biene" that bee-keepers have arrived at a wrong conclusions, when they think they can more successfully unite bees by spraying them with strong smelling substances, or smoking with tobacco smoke, than by uniting them without such means. Bees will usually unite peacefully, particularly at night, and when they cannot be united without these auxiliaries, peppermint or tobacco will not do it unless the bees are almost stupefied or overcome with the drugs. Clear water, he says, will be as effective as anything else.

Whether it is the peculiar hive-odor by which bees of one and the same colony recognize each other is not yet fully and satisfactorily proven, although we cannot understand what other factor it could be. At any rate there is a field open for investigation.

The honey bee does her work as prompted by the impulse of the moment. Wherever she happens to be she performs such work as she finds needs doing.—Dzierzon. (The writer don't believe that bee-keepers agree to this conception of the bee.)

At a bee-keepers' convention in Germany Rev. Selig said, the people should familiarize themselves with bee-keeping. (1) Because of the beneficial influence it would have upon man. (2) For the good of the bees themselves. (3) Because of the advantage bees are to the plants.

H. Ritter expresses his doubts in Die Biene as to the queen mating, but once in her life. (Clipping queens for a series of years should settle that matter for him.)

DISTURBING BEES IN WINTER.

The reason why an apiary should be located where the bees are not annoyed by noises and disturbed by jarring, is thus given by Zurricher, in Schlesuig-Holstein Bienenzeitung: During cold weather bees are closely packed in their hives and occupy the least possible space; by consuming honey they keep up the necessary warmth. The consumed honey is so well assimilated as to leave but a small amount of residue in the intestines of the bees and under favorable conditions they can retain this accumulation or excrement till spring time comes. However, when disturbed by heavy jarring the cluster is broken, the bees become uneasy and scatter about the hive. To a great extent this causes loss of heat; to replace this requires the consumption of an extra amount of honey every time the disturbance occurs. The accumulation in the intestines under such conditions is, of necessity, greater than it would have been under more favorable circumstances. If the bees have not frequent flights it may come to such a pitch that they are unable to hold the excrements and are obliged to void them inside of the hive; which will, of course, prove disastrous.

On the other hand, Wurth, in Die Biene, tells of an apiary located in the upper story of a cooper shop. With all the noise and hammering and jarring below them the year round, the bees do well and usually pass the winter in good shape.

The writer has a glass-observation hive standing in an upper room in his house. It has been there for years. The bees seem to endure all the noises, the walking on the floor and the slamming of the doors without bad results. They always have wintered as well as other colonies in the yard, and a little better than the average.

Didn't Want the Honey. "I can not take your honey this year," wrote a dealer to a Holstein bee-keeper. "What's the reason? We have very fine honey." "Well, yes, but the president of your Association wrote in the bee paper lately: 'We are just swimming in honey this year.' "—Gosch.

Burghard, of Strassburg, employs the blaze of a lamp to remove the cappings of combs. He just melts them away before he extracts. The honey, after extracting, contains no particles of comb, it is said.—Deutsche Bienenzucht.

A GOOD SPECULATION.

In some sections of Germany there are still many bees brimstoned. W. Stuber tells, in Gravenhurst's Bienenzeitung, how he has saved a great many colonies condemned to be killed, with profit to himself. He went around among the bee-keepers and bought colonies of that kind cheaply. These colonies were not in movable-comb hives. He took them home, cut out all the comb, extracted what honey he could from the pieces of comb, transferred them to frames (small frames), placed the latter regularly in hives, united from two to four colonies and hived them into these hives. The drippings and smallest pieces of honey not well suited for extracting, he fed back to the bees, bought sugar and finished feeding up for winter. The money received from the sale of the honey was more than that paid out for sugar, leaving him a balance which was somewhat swelled by the receipts from the sale of the wax. The bees themselves were, of course, a clear gain and usually paid handsomely the following season.

(Years ago, when bees were of greater value than at present, the writer has saved quite a few colonies in a similar fashion. Instead of feeding them, he just hived them on honey combs, taken from other hives during the season.)

Dzierzon tells in Leipziger Bienenzeitung, of a reasonably sure method by which queens may be purely mated: As early as 8 o'clock in the forenoon, if the weather is bright, queens and drones may be induced to fly for mating purposes by exciting the colonies containing them with a sweetened water-spray by way of the entrance. He considers this method superior to the other one of confining the colonies, having the young queens, in a dark cellar till afternoon, when the drones of all other colonies have ceased flying.

ENGLAND.

A Comical Misunderstanding.—Lord Cecile was an enthusiastic bee-keeper. One day when among his bees he came across a colony without a queen. He immediately wrote to a queen breeder in Welmin to send him a queen at once, which order was filled accordingly; at the same time a telegram was sent to the Lord: "Queen will be on train 3:40." When Cecile went to the depot in the afternoon to receive his precious bee, to his surprise he found the mayor and whole aristocratic circle of Slatefield already there in full uniform and dress to await the arrival of "the Queen," which however did not prove to be the Queen of England, but only an Italian queen bee. The telegraph operator should have kept still.

CHINA.

A Chinese bee-hive is described by Wurth in Die Biene: It is made of palm bark and bamboo. The interwoven structure is coated with clay or cattle droppings. The latter are first mixed with a sort of rubber, which is made from the Koo-schu tree. Access to the interior of the hive is gained by a circular door, having a very small bee-entrance in its center. All hives used in China are provided with small entrances as a protection against the numerous insect enemies.

F. Greiner.

Naples, N. Y., Feb. 1, 1902.

Meridian, Idaho, Jan. 23, 1902.

Editor American Bee-Keeper:

Dear Sir: At Parma, Ida., on Jan. 18, 1902, the Idaho State Bee-Keepers' Association was organized.

President—F. R. Fouch, Parma, Ida.

Vice-President—W. F. Schull, Roswell, Ida.

General Manager—E. F. Atwater, Meridian, Ida.

Secretary—(Miss) B. M. Petersen, Lower Boise, Ida.

Membership fee, $1 per year.

Yours truly,

E. F. Atwater.

DEPARTAMENTO DE ESPAÑOL.

MISTERIOS DE LA COLMENA

Guia del Apicultor Cubano
por el
DR. JUAN B. PONS Y FONOLL
y anotada por el
DR. GONZALO G. VERTA.

(Continua.)

Otro género de abejas sin aguijon es el llamado Trigona, las cuales tienen álas mas largas que el abdómen y las mandibulas dentadas. Se encuentran no solo en el nuevo Mundo si que tambien en Africa, India y Australasia; forman sus panales en altos arboles suspendiendolos de las ramas.

Hay otros géneros tales como el Bombus, Xilocopa que con sus fuertes mandibulas taladra las maderas de los edificios para formar sus nidos; las abejas albañiles que construyen celdas de tierra, parecidas a las de la avispa y pertenecen a esta clase los géneros del elegante Osmia, las brillantes Angocloras y las muy numerosas Andrenas.

El genero Megaliche ó abejas sastres, que forman sus celdas con hojas de flores, principalmente de las rosas, que cortan con sus fuertes mandibulas, dandoles forma redonda u oblonga maravillosamente matemática.

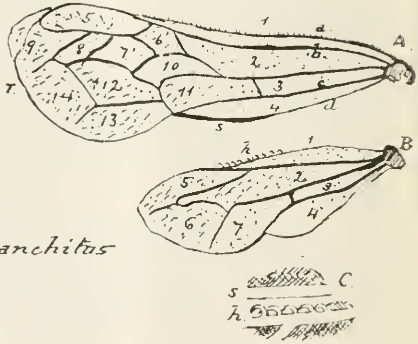
Género de la abeja.

El genero Apis, incluye todas las abejas que no tienen espolon tibial en las patas posteriores y al mismo tiempo tienen tres celdas cubitales ó sub-costales (6, 7, 8, Fig. 5).

La celda marginal es muy larga. En el interior del tarso posterior, opuesto al cesto de polen, hay hileras de recios pelos, en las obreras ó neutras, los que se usan para recolectar el polen.

En los machos, que no trabajan, y

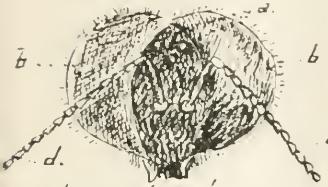
Fig. 5.



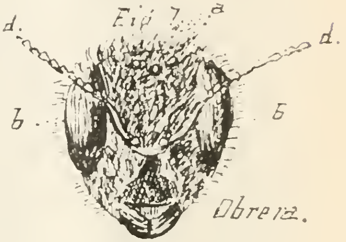
A. ála anterior
B. ála posterior.
C. ganchitos muy aumentados.
a. vena costal.
b. vena subcostal.
c. vena mediana.
d. vena anal.
r. márgen posterior
s. doblez donde se sujetan los ganchitos
h. ganchitos.
1. elda costal
2. id. mediana
3. id. submediana
4. id. anal.
5. id. marginal.
6. 7. 8. y 9. celdas submarginales
10 11 y 12. id. discoidales.
13 y 14. id apicas

solo sirven para fertilizar las Reinas. los grandes ojos compuestos se ven por arriba, coronando los tres ojos simples debajo. (Fig. 6.) mientras en las obreras y reinas estos ojos simples estan arriba entre los ojos compuestos que están separados (Fig 7.).

Fig 6.



Cabeza de zángano. (aumentada)



a. ocelos, ojos simples. — b. ojos compuestos. — d. antenas.

Especies del genero Apis.

Hay alguna duda acerca del numero de especies de este género. Es cierto que el Apis ligustica de Spinola, ó abeja italiana. el Apis fasciata de Latreille. ó abeja egipcia. la abeja de Chipre y la de Syria que Mr. Benton asegura son dos razas distintas, sin embargo no son mas que variedades del Apis mellifica. en la que tambien debe incluirse la abeja alemana ó negra.

Varios entomólogos consideran el Apis dorsata de la India: Apis sonata de las islas las Indias orientales: Apis Indica. de la India y de China: Apis florea de la India, Ceilan. China y Borneo, como distintas especies. El cree tambien que el Apis Adansonia y el Apis nigrocinta son distintas aunque asegura que pueden ser variedades del Apis Indica, Como el Apis mellifica es originaria de Europa, Oeste de Asia y Africa y como no se encuentra en la India, parece posible, aunque no probable que muchas de ellas sean variedades del Apis mellifica.

El siguiente cuadro dará idea de las distintas especies, razas y variedades.

A Mr. Jones y á Mr. Frank Benton, debemos la descripcion del Apis dorsata y del Apis florea, dice asi. Estas abejas (la Apis dorsata) usualmente suspenden sus grandes panales, de las rocas.

Especies.	Rasas.	Variedades.
Apis Indica.	A. dorsata nigripennis.	
Apis Florea.	A. dorsata bicolor.	
Apis dorsata.	A. dorsata zonata.	
Apis mellifica.	A. mellifica negra (abeja alemana.)	Carniola. Heath. Austriaca. Negra comun.
	A. mellifica fasciata. abeja de Egipto.	
	Sina	
	Chipre.	
	Palestina del Sud.	
	Italiana.	
	Griega.	
	Bonnat.	
	Caucasica.	
	Abeja de China.	
	A. mellifica unicolor de Madagascar.	
	A. mellifica Adansoni—abeja Africana.	

Estos panales llegan á alcanzar seis pies de largo por cuatro pies de alto.

Estan colocados uno al lado de otro separados por un espacio de pulgada y media. El grueso en la parte superior que contiene la miel, varia de tres á seis pulgadas, mientras que en los lugares donde está la cria, tienen de una á una y media pulgadas. Los zánganos y las obreras se crian en celdas del mismo tamaño. tan grandes como las celdas de zánganos de nuestras abejas. Las obreras se asemejan mucho en tamaño y figura á nuestras Reinas Italianas. Tienen las álas de un negro azulado. el cuerpo negro con anillos amarillos como nuestras Italianas, pareciendose en la forma, tamaño y modo de volar á las avispas. Son del mismo tamaño los zanganos y las obreras, variando de tres cuartos á siete octavos de pulgada de largo.

Se subyugan muy bien con el humo; el aguijon no es mas largo que el de mestras abejas comunes y la picada no es tan dolorosa. Los zánganos son de color pardo oscuro con fajas amarillas. Las reinas son de amarillo de cuero.

En cuanto al Apis Indica y el Apis florea que se encuentran en la isla de Ceilan. Las primeras son de color pardo con los anillos amarillos y las segundas son de color pardo con pelos blancos en los anillos del abdomen. Los demas caracteres son los mismos que los de nuestras abejas.

Razas.

Abeja negra ó alemana.

La abeja negra ó alemana es la raza mejor conocida. El nombre de Alemana proviene de la localidad mientras que el de negra no es tan exacto pues es de color gris negro.

La Reina y los zanganos son de color mas oscuro aunque las patas posteriores son de un color rojizo. La lengua es mas corta que la de la raza Italiana.

Las carniolas son una variedad de esta raza aunque son mas largas. Son asi mismo variedades de esta raza las Austriacas y las Heath.

Abeja Italiana ó de Liguria.

Esta abeja esta caracterizada como una raza, no solo por su color, sino por sus hábitos, actividad y por poseer una lengua ó ligula mas larga y por lo tanto puede libar en flores de córola mas profunda donde la abeja alemana no puede alcanzar. Esta raza fue descrita por Spinola en 1805 quien les dió el nombre de abeja de Liguria, nombre de una provincia del Norte de Italia Golfo de Liguria ó de Genova de donde es originaria esta raza. Esta region está cerrada el Norte por los Alpes que la separan del resto de Europa.

Puede decirse que la abeja Italiana es un insecto de montaña pues solo se encuentra entre Lombardia y los Alpes á la altura de 4500 pies sobre el nivel del mar, siendo los Alpes su residencia nativa.

Algunos Apicultores créen que la abeja Italiana es una variedad de la Chipriota ó abeja de Chipre.

En 1859 los Sres Wagner y Colvin importaron esta raza de Abejas en Norte América donde se ha extendido su cultivo y en 1860 Mr. S. P. Parsons introdujo las primeras colonias que fueron importadas directamente de Italia.

Ninguna raza de abejas existia en America del Norte hasta el descubrimiento, pues los indios no tenian pala_ bra con que designar la miel y la cera que no conocian. Cuando los Europeos introdujeron la abeja negra ó comun los indios les dieron el nombre de *moscas del hombre blanco*, y se crée que las primeras abejas importadas por los Españoles, lo fueron en la Florida en el año 1763. Ningun dato tenemos de la época en que fueron introducidas en la Isla de Cuba aunque parece probable lo seria poco despues de importadas en la Florida hácia el año 1780.

En la America del sur aunque no se conocia la especie Apis mellifica, sin embargo se conocian y conocen las meliponas y trigonas cuyos caracteres hemos descrito.

La abeja Italiana designada por Aristóteles y Virgilio como la mejor variedad existe aun distinta y pura apesar de los dos mil años trascurridos desde aquella época.

La gran superioridad de esta raza, es reconocida universalmente por todos los apicultores:

1o porque la abeja italiana es menos sensible al frio que la abejas comun ó negra.

2o Sus reinas son mas prolíficas.

3o Defienden mejor la colmena contra toda clase de enemigos, insectos, polilla, etc.

4º Son mas apacibles y menos inclinadas á picar.

5º Son mas laboriosas.

6º Son menos dispuestas para el robo pero son mas vale rosas y mas activas cuando tienen que defenderse.

7º Son mas fáciles de manejar.

8º Son mas grandes y tienen mas larga la ligula.

(Continuará.)

Rogamos á nuestros suscritores que al dirigirse á un anunciante hagan referencia al "American Bee-Keeper." tf

Cambiemos libremente nuestros ideas y ayudemos por este medio á levantar la industria.

A parte del provecho que las abejas dan á su dueño cuando bien manejadas, no hay en el mundo entero negocio alguno que aproxima al operador mas á la naturaleza ni que le reditue mayor cantidad de placer.

Si V. es un apicultor práctico haganos saber lo que V. ha llevado á cabo y como V. lo ha hecho. Si V. es un principiante y busca luz ó información sobre algun asunto particular, escriba sus preguntas al Dr. Vieta y él os ayudará con su consejo valiendose del "American Bee-Keeper."

Si V. encuentra el American Bee-Keeper interesante y util, tenga la bondad de hablar de él á sus amigos interesados en abejas. Mientras mas suscritores tengamos mejor podremos hacer el periodico. Ayudemonos mutuamente.

Si V. necesita algo en ramo de apicultura lea el anuncio de "The American Manufacturing Company" en otra página de este impreso.

Tenemos una lista completa de los apicultores de la Provincia de Santa Clara. pero quisieramos poseer los nombres de todos los apicultores de Cuba. A todo aquel que nos envié una lista de diez apicultores. fuera de la Provincia de Santa Clara. mandaremos el American Bee-Keeper un año entero gratis. tf.

Where Bee Sheds are a Convenience.

(By L. E. Kerr.)

IN the majority of cases we would prefer putting our bees out in the open, on individual stands, but we have lately found that not in every instance is it desirable for since moving to our present location we find that a hive within a foot or so of the ground. on an ordinary stand. will be literally painted with mud from the flying sand, after every rain during the dry summer. For this reason we have found it convenient to put our bees under a shed. Also in a city. or other place where room is limited. such a shed would be equally as convenient. While in the country, where the bee ranch can be allowed to spread itself. unrestricted, it becomes a matter of ability.

We have the advantage of those who practice bringing the hives together at the approach of winter in order that the warmth of each hive may be of benefit to its neighbor; for while they are changing hives around and getting bees hopelessly mixed up and confused, we have only to pack ours away as they are. The only drawback is in having the hives so close together during the summer; but we prefer rather to mark the hives for the bees. than to shuffle them around from one place to another in preparing them for winter. Please bear in mind that we have been writnig for the benefit of the honey producer. In breeding queens for the trade we would want our bees on individual stands. We can raise honey. however. and buy our queens cheaper than we can raise them.

Hurricane. Ark.

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"Stenog." Gleanings' scholarly reviewer, with reference to our February Spanish department, says: "It seems to have been put in type by those who do not understand that language." It was exceedingly kind of our critic to not have said the same of the English which appeared in the same number: a thing he might have done. with equal truthfulness.

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Subscribe for
THE BEE-KEEPER.

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H. E. HILL, - EDITOR.

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H. E. Hill,
Fort Pierce, Fla.

Subscribers receiving their paper in blue wrapper will know that their subscription expires with this number. We hope that you will not delay favoring us with a renewal.

A red wrapper on your paper indicates that you owe for your subscription. Please give the matter your early attention.

Editorial

The editors of Gleanings and the Review are agreed in the opinion that within a few years the great bulk of our honey production will be west of the Mississippi river. Both of these gentlemen have "been out west," looking over the situation and therefore ought to know.

An exchange recently published a likeness of the man who invented the V-shaped top-bar. Rather a questionable honor: is it not?

There are one or two among us to whom the beauties of Maeterlinck's delightful book are overshadowed by the trifling inaccuracies which are but the imprint of humanity.

We have pleasure in presenting this month an excellent portrait of Michigan's state inspector of apiaries. Mr. John M. Rankin: whose indefatigable efforts to wipe out the foul brood of his state have elicited the praise of all progressive bee-keepers.

All queens offered for sale are "red-clover" queens. No queen on the market today but the "long-tongued" kind. Buyers will have no choice in the matter this year. It's the very long-tongued variety or none at all. Order early and avoid the rush.

Our printer, who, by the way, has more than a local reputation as a streak-lightning workman, in making up the forms for the February Bee-Keeper, served up a piece of "pi," which, no doubt, many of our readers observed, in the second editorial column. It was decidedly the most distasteful thing passing under that name that the editor has encountered in a long time. In the future we will serve a better quality, or none at all.

Will our correspondents who occasionally favor us with contributions, and from whom we are always pleased to hear, very kindly be as brief as possible in stating what they have to say.

Our space is so limited that we are frequently obliged to decline articles containing much of interest, simply because of their verbosity. State your case in just as few words as possible, please; and write often. These letters from our readers are most highly esteemed; and it is a matter of regret that our space will not always permit us to give them place in The Bee-Keeper.

There is somewhat of a controversy on in regard to the proper pronunciation of the word "super," so commonly used among bee-keepers, to designate the surplus attachment, over the hive proper. Should not the source from which it was evidently derived, the Latin preposition, set the matter at rest? Super, above, over, excess. The man who pronounces it "sooper" will probably find himself upon as safe ground as those who insist in perverting it into "supper." Supper is the evening meal, or one who sups. Super is another word, both in spelling and pronunciation, and probably will so remain among bee-keepers until "supperfluous," "supperabundant" and "supperincumbent" make their appearance in the English dictionary.

Many readers of The Bee-Keeper will be interested this month in seeing a late likeness of Mr. W. T. Stephenson, the Illinois bee-keeper who has occasionally favored our columns. When we received the photo, we were inclined to believe that Friend Stephenson had by mistake enclosed a picture of his youngest son, instead of his own. Upon inquiry, however, we were assured, in substance, that the picture sent was that of Old Stephenson himself, all right. Mr. Stephenson's writings bear evidence of remarkable familiarity with the subject of apiculture, for one of his evident youth, and we are pleased to number him among our occasional contributors. It is his intention to locate permanently in Wisconsin where he will pursue apiculture as a specialty. The editor of the Bee-Keeper has a very warm place in his heart for the boys who are coming forward to assume the burden, and direct the nation's apicultural affairs. Next month we will present a splendid picture of a New Englander whom we believe to be the youngest bee-keeper in the country. Let us hear from the boys still farther. Who is the youngest bee-keeper?

THE "NATIONAL" ELECTION.

The following report, received from Secretary A. B. Mason, of the National Bee-Keepers' Association, confirms the expressed opinion of several leaders in the Association's work that nominations are a prerequisite to satisfactory balloting, in this, as in other organizations. Not that there is any dissatisfaction with the result of the election, but the scattering vote and "split tickets" obviously reveal the weakness of the system employed:

Toledo, O., January 27, 1902.

We, the undersigned, have this day counted the ballots cast for general manager, and three directors of the National Bee-Keepers' Association to fill the vacancies caused by the expiration of the terms of Eugene Secor, as general manager, and J. M. Hambaugh, Dr. C. C. Miller and C. P. Dadant, as directors, and find that 338 ballots have been cast, of which Eugene Secor received 172. The other 167 ballots being cast for twenty-nine different members, the largest number of votes cast for any one of them being 33.

For directors, J. M. Hambaugh received 181 votes; Dr. C. C. Miller received 233 votes and C. P. Dadant received 216 votes. The other votes being cast for 109 members, the largest number cast for any one being 29.

We have also counted the votes cast for and against the proposed amendments to the constitution, and find that 215 were cast for the first amendment, and 93 against it; and 264 votes were cast for the second amendment, and 47 against it.

A. B. Mason,
S. J. Griggs,
Committee.

Dr. Mason, personally, favors the idea of electing the officers and directors at the annual conventions, which, he says, other organizations do. The suggestion seems to be a good one, and we should be pleased to have our readers who are members of the Association, express their opinion as to its practicability. It's a live question.

HONEY PRODUCTION OF THE UNITED STATES.

In The Bee-Keeper for January, Mr. W. A. H. Gilstrap called the attention of readers to the necessity of urging an increased appropriation by congress for statistical work. The importance of the efforts will be more apparent to many after reading the following self-explanatory letter:

United States Department of Agriculture, Division of Statistics, John Hyde, Statistician, Stephen D. Fessenden, Asst. Statistician.

Washington, February 4, 1902.

Editor American Bee-Keeper:

Dear Sir: I am in receipt of your letter of January 29, 1902, addressed to the Honorable Secretary of Agriculture, and by him referred to this Division, in which you ask for the latest statistics in the possession of the Department relative to the honey production of the United States.

I have to advise you that the department is in possession of practically no figures upon this subject. It has been unable in the past to gather any such figures by its own efforts, and the figures published in the current papers are usually no more than estimates and apply only to portions of the country. From one trade paper an estimate of the California crop for 1901 has been obtained and is 4,800,000 pounds. I understand that the California crop is considered in the trade as practically the whole commercial crop of the country. While considerable honey is raised in other sections, yet it is safe to say that the California crop is more than half of the total.

Regretting that I cannot furnish you with anything further or more definite upon this subject, I am

Very truly yours.
John Hyde.

There were, according to the U. S. census report, 63,894,186 pounds of honey produced in the United States in 1889—twelve years ago; and today the annual production will doubtless exceed 150,000,000 pounds, which, at the ordinary prices of five cents for extracted and ten cents for comb—allowing that one-third of the product is of the latter class—would represent a cash value of $10,000,000. The eleventh census of the United States gives the honey product of 1869 as 14,702,815 pounds. Thirty-two years later—Feb. 4, 1902—the division of statistics of the agricultural department believes 4,800,000 pounds, produced in one state, to represent more than half of the total honey product of the Union.

As it appears to this journal, the bee-keeping industry—an industry which adds, approximately, ten millions of dollars annually to the nation's wealth, is entitled to fuller recognition than is at present accorded. No one outside of the fraternity, however, will ever plead the bee-keepers' cause. We must ask, urge, demand.

There is said, by a writer in Florida Magazine, to be at this time a ship lying in Tampa Bay, which has returned from a cruise of nearly seven years, extending far beyond the south pole; where, according to the lamented Mr. Copernicus, there is naught but interplanetary space. The captain of this ship, which brings tidings of a new continent, invites all to come aboard and witness the evidence of his discovery. The Bee-Keeper man has not yet had the privilege of interviewing the Captain; but, in the interest of W. L. Coggshall, John H. Martin and its own circulation, it shall endeavor to do so without delay.

Literary Notes.

"Niagara—The Scene of Perilous Feats" is the title of an article in the February Cosmopolitan which tells the story of the many who have year after year gone to Niagara seeking notoriety or—death. From the earliest days Niagara has been the Mecca of those who valued their lives lightly and the story of Sam Patch, Blondin, Maria Spelterina, the jealous Balleni's attempt to cut the cable on which his rival was performing over the seething Whirlpool Rapids, Peter Nissen's ill-fated "Fool-Killer," and Captain Webb's last swim, is carried down to Mrs. Taylor, the only survivor of a trip over the great Falls.

In an article on After Dinner Toasts in What to Eat, the writer says: "To the witty after-dinner speaker belong rightly the glories of the feast. Many a man returning from a banquet assailed by his wife with 'What did you have to eat?" says sleepily, "Oh, I don't remember the feed but I heard some rattling good stories. Judge X told the best one I ever heard.'"

Mexico is considered by Felix L. Oswald, M. D., in "International Food Studies." Alethe Lowber Craig has an interesting article on "Washington Fashionable Dinners," describing an orchid dinner, the most expensive in the annals of Washington society.

The stories for the month are: "At the Cafe de L'Europe" by Kilbourne Cowles, and "Peggy's Valentines," a children's story by Laura A. Smith.

"White Flour Vs. Health Flour" is a strong editorial in the series which has awakened much attention.

◆◆◆

HONEY AND BEESWAX MARKET.

Kansas City, Mo., Feb. 7.—We have a good supply of honey, with light demand. We quote, comb honey, 12 1-2 to 14c; extracted, 6 to 7c. We look for a better demand in March. Beeswax, none on the market.

Hamblin & Sappington.

Boston, Jan. 4.—Comb honey is in good supply and not working off as well as would like to see it at this season. Prices are ranging as follows: Strictly No. 1, 15 to 15 1-2 cents; No. 2 14 cents; extracted, white, 7 to 7 1-2 cents; light amber, 6 1-2 cents.

Blake, Scott & Lee.

Buffalo, N. Y., Feb. 7.—Demand for honey is better than usual, with moderate supply. We quote fancy comb, 15 to 16c; extracted, 5 to 7c. Honey of any grade sells well; dark at 8 to 12c, as to grade. Those interested, please write. The supply of beeswax is the lightest in years. We quote fancy yellow wax at 28 to 30c; dark, 20 to 25c.

Batterson & Co.

New York, Dec. 9.—The comb honey market is in about the same condition as our last advices, there being a good demand with enough receipts arriving to take care of all business. We quote as follows: Fancy white, per pound, 15c; No. 1, white, 14c; No. 2, white, 12 to 13c; Buckwheat, 10 to 11c.

Francis H. Leggett & Co.

Chicago, Nov. 13.—The market is easier in tone, while prices are nominally the same, but would be shaded to effect sales. Some cars of honey en route to eastern cities have been diverted to this and surrounding points, which is having a depressing effect.

Comb brings 14 to 15 cents for best grades of white, and light amber, 12 to 13 cents; dark grades, 10 to 11 cents; extracted white 5 1-2 to 6 1-2 cents, according to quality, flavor and package; light amber 5 1-4 to 5 3-4; amber and dark, 5 to 5 1-4. Beeswax, 28 cents.

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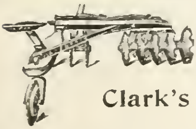

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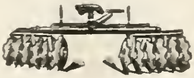

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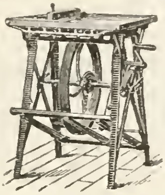

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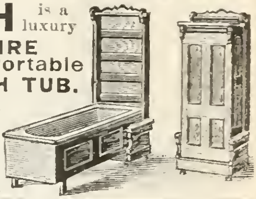

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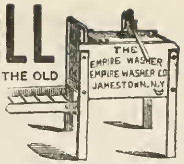

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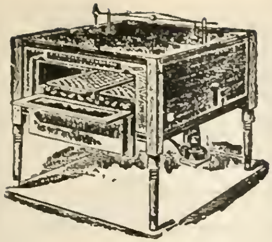

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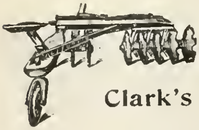

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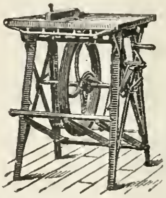

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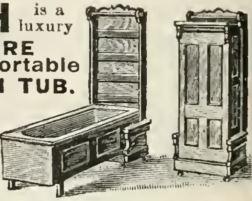

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THE AMERICAN BEE-KEEPER

Published Monthly by The W. T. Falconer Mfg. Co.

Vol. XII APRIL 1902 No. 4

A GARDEN.

Say, let us plant a garden fair,
 With old-time flowers in it;
And give it every day some care,
 If only for a minute.
Let tender thoughts work out the plan,
 And loving words give reasons,
For these can do what naught else can—
 Make summer of all seasons.
Oh, let us build a garden fair
 And make it one long summer;
Just one small spot that all may share,
 No matter who the comer;
And set therein sweet mignonette,
 Whose greetings soft and tender,
May make the shyest heart forget
 The outward show and splendor.

Yes, let us make a garden fair,
 Of smiling flowers and faces,
To glad the earth where it is bare,
 And brighten life's dark places.
Let roses beautify the May,
 And winter pinks, December,
So every one that comes our way
 May pass on and remember.
—Selected.

Spring Dwindling of Bees and Its Causes.

(By W. W. McNeal.)

IN the beautiful spring time when nature begins to unfold her charms and the bee awakens from her long winter's sleep and again assumes the cares and responsibilities allotted to her, how important it is that the vitality, which is now fading so fast, be shielded in every possible way; for though the sun may shine brightly, the greater part of the colony are far on the shady side of life.

The movable-comb bee-hive, while it greatly facilitates work in the apiary, compromises in a large measure the natural protection of the old box-hive to the bees. This must be conceded, since bees in box-hives nearly always pass this critical season of the year more successfully than do those in frame hives.

You may say it is because colonies in the larger box hives usually have more and better stores; that by reason of the good, ripe sealed honey the bees winter better and they are stronger than if compelled to feed upon honey that was gathered late in the fall. This is all very true and one of the essentials in the prevention of spring dwindling. But the natural advantages of the box-hive is seen further in the fact of the combs being attached to the cover-board, thus dividing the spaces between the combs into so many little rooms. The bees are enabled to regulate the heat of the cluster earlier in the season for it is held right where it is needed. And by the time the bees can fly actively in the spring, there are a large number of young bees ready for duty.

In frame hives the air circulates freely all round the combs and unless the hive has abundant protection from the cold, the actual comb space within the clusters that is sufficiently warm for brood rearing, is so small that the colony barely holds its own till the arrival of settled warm weather. The old bees wear themselves out from exposure in a vain attempt to carry on brood rearing. With the air circulating freely throughout every part of the hive and a loose cover-board permitting the escape of warm air, the conditions are about as adverse as they could be. These conditions will winter a colony of bees but they won't carry them safely through the spring. When the colony is compactly clustered and quiet during the cold of winter, upward ventilation will keep the combs dry and the hive sweeter than when no means of ventilation is provided. But notice the difference in the requirements of the colony during the two periods. A mild, dry atmosphere for the former, a warm, moist one for the latter. Water is almost as essential to bees when breeding, as pollen; and if they cannot get it within the hive they will go outside for it on days that are so cold that hundreds, yes thousands of them become chilled and never get back to the hive. There cannot be a very appreciable gain in the strength of a colony when an old bee is lost for every young one reared in this way. Of what avail is the giving of good, ripe stores for winter food—which contain a very small per cent of water—and then compel the bees the following spring to go down to the branch and sip the cold water to their almost certain destruction?

These are fine points in the management of bees and we cannot afford to ignore them. By closing the spaces between the combs at the top, the heat within those spaces actually occupied by the cluster, will be enough warmer than the surrounding atmosphere to cause a perceptible condensation of moisture upon the outer combs and the hive walls on days that are too cold for bees to leave the hive with safety. If cool, dry winds prevent the practical effect of this and the bees give evidence of the fact, I would give them water in a Doolittle division-board feeder. It is well known that bees will not leave the hive only under pressure during unfavorable weather, and no progressive bee-keeper will suffer his colonies to become depleted in number by searching for water in early spring.

As soon as the winter season proper is over or when the protracted cold of winter is past, colonies in frame hives should have the cushions removed and common newspapers laid snug and trim directly on the frames, within the bee space. Then if a telescope cover is used, several thicknesses of paper should be laid on extending out over the edge of the hive far enough to lap down warm and tight when the cover is on. An empty super placed on top of the paper and the cushion again pushed down into it, makes the hive conditions as good or better than those of the box hive. One can often get old sample copies of newspapers at almost any postoffice for the asking. The bees will sometimes gnaw the paper somewhat and some colonies will do this more than others. But they seldom gnaw clear through them before it is time to remove them from the hive. In fact I regard this rather as a help in determining the strength of colonies, for the strong ones will pile up more paper fuzz at the entrance. Weak colonies should have their hives exchanged for clean, dry, warm ones before the papers are put on. By putting a sheet of waxed paper next to the frames, the bees will usually not bother them much. A little later on, all colonies should be overhauled to determine the amount of stores each contains. If some have died outright the combs of honey left can be distributed among the other colonies very advantageously.

Spring feeding is more often a source of evil than it is one of good; that is, when liquid honey or syrup is given the bees daily in small quantities, for it entices them to fly out on days when they should remain in the hive. This kind of feeding is one which beginners will do well to let alone save on a small scale for experimental purposes. When it is absolutely necessary to feed I advise giving enough at one time so that the job may be gotten through with as soon as possible.

To sum it up, spring dwindling is but the logical consequences of a wrong usage of the modern hive. Give the bees a chance by observing the foregoing regulations and this difficulty may be entirely surmounted.

Wheelersburg, Ohio, March 1, 1902.

Feeding.

(By Arthur C. Miller.)

TO FEED or not to feed? That is the question, and I presume that for some time yet it will continue to be answered by most bee keepers according to their own idiosyncrasies. However, a few more words may not be amiss, even though the editor gave a very good exposition of the merits and demerits of the subject.

I have been and am still experimenting with stimulating food for bees, but I am already satisfied that, here at least, feeding in the spring is done at a loss. Cane sugar syrup has to be "inverted" by the bees, and that process calls for an expenditure of vitality that old bees, after a winter's confinement, can ill meet. Under normal conditions —during the natural flow of nectar— there are an abundance of young bees to do such work, and it is believed that they do much, if not the greater part, of it. But in the early spring when stimulative feeding must be done if to be of any use, there are but very few young bees and so the labor falls upon the old ones. If we could afford to feed honey or honey and water at such times, would not such evils be avoided, it may be asked. Not entirely. I cannot discover that colonies stimulated with honey and water are in one whit better condition for the harvest than are colonies let entirely alone, but having plenty of honey (and pollen) left from their winter supply. On the contrary, even with such skill as I have acquired in the past twenty and odd years, spring stimulated colonies are more often behind the others than ahead of them. Other things being equal I believe bees winter better when they have a superabundance of stores than they do if they have barely enough to carry them through.

It may not be considered as economical management to give colonies much more honey for winter than will suffice them till fruit bloom. Perhaps it is not in some places, but it certainly is the best plan here and colonies so supplied are ready for the supers first and produce as fine a grade of white comb honey as can be desired. The dark honey, which may be in the combs below, never seems to be carried into the supers, so that feature is no bugbear.

If the bees are in warm, dry hives in a sheltered and sunny location they will breed up as fast as any one can desire. Mine began brood rearing in January this year and now (March 5) are busily at it. In the matter of warmth I find that the wrapping of tarred paper about single-walled hives continues to work most satisfactorily. During the past winter I have had seven colonies so protected and they are now in prime condition. The black surface of the paper absorbs the sun's rays and the hives are warmed through and through and yet the bees do not seem to fly abnormally or in unseasonable weather.

If any other bee-keepers in any part of the country have tried this plan I hope they will report the results. At present it looks as if an abundance of stores in warm hives is of more value than any amount of stimulative feeding, and certainly such arrangements will be seen to be far the most economical when compared with cost of food and labor of feeding.

Providence, R. I., March 5 1902.

BETTER BEES.

ANOTHER PROPOSITION WITH A VIEW TO SECURING THEM.

(By A. E. Willcutt.)

THE question is, how are we to get them? This subject is a very important one, and is receiving much attention of late. But there is one thing we must do before we can make very fast advancement. We must control the mating of the queens. If this can be done, we may be able to make some wonderful strides forward in a short time. Some seem to look upon it as one of the unobtainable things, and have given it up in despair. Now let's not give up just yet, for I believe it can and will be accomplished in time.

Why not make a mighty effort during 1902 to accomplish it? I believe there has been many more difficult problems than this one solved, therefore let's take courage and make the attempt. The plan which looks most promising is the tent. There is but little doubt (in my mind) that a large enough tent would "do the business." The cost of a large tent would be more than most of us would care to invest, unless pretty certain of success. Why not every bee-keeper interested in these experiments, donate a "quarter" to help along the work? I'm sure this small sum would be given gladly by a great many who would be glad to help, but could not make the experiments alone. Why could not these experiments be conducted by the "National

Bee-keepers' Association? Or by a committee appointed for the purpose. There are many who would give more than the "quarter" if the experiments could be placed in the hands of competent men. Some may ridicule the idea of having queens successfully mated in confinement. But just wait till the thing has been accomplished, and see how many will be "claiming the honors." This isn't a scheme to benefit just those who rear queens for sale: but will be a great benefit to the whole bee-keeping fraternity.

Mr. J. S. Davitte, of Georgia, claims to have had 100 queens successfully mated in a tent 30 feet high and 30 feet across, in one season. If this is true, why can we not, with a much larger tent, control the mating of thousands.

I shouldn't be much surprised if that hard-scrabbling old "Deacon" came around pretty soon advising us "little fish," to get out of such deep water, but we shan't mind him if he does; for we want to rile up the water, and get the "big fellows" to using their fins (pens). If we can get them waked up, we "little chaps" will get back to more shallow water and watch proceedings.

Swift River, Mass., Feb. 10, 1902.

Dividing Colonies.

(By G. M. Doolittle.)

A SUBSCRIBER to the American Bee-Keeper wishes me to tell in that paper some of the plans I use in dividing bees where I wish to make just one new colony from each old one. Says he cannot well look after swarms, as he must work ten hours a day in a manufacturing plant.

I have three plans which I have used successfully, but before giving either of them I wish to say that no one should attempt the division of any colony of bees till the combs which said colony occupies are filled with brood and well covered with bees. In other words, it is a loss all around to attempt to multiply colonies until the hives are in a condition like they usually are when natural swarms come out, for to divide weak colonies discourages both parts of the division, resulting in no surplus honey, and generally in colonies poorly prepared for the winter.

Having a colony strong in bees, brood and honey, you can proceed to divide it as follows: Go to where it stands, taking with you a new hive filled with frames, each of which is full of comb foundation, or, better still, full of comb. Remove the old hive from its stand, setting it near by so you can have everything handy for manipulating the same. Now set the new hive on the stand the old one occupied and take out four of the frames, providing your hive is a ten-frame hive. If an eight-frame hive take out only three. Next, divide the six frames left in the new hive, by leaving three of them on one side of the hive and three on the other. Now open the old hive and look the combs over till you find the frame the queen is on, when you will set this frame in the new hive, near the center, taking all the bees on the frame and comb. Having done this, select three more combs from the old hive, two of which are to be those having the most young brood in them, such as has not yet been sealed over, and the other to contain mainly honey. These are to be set in the new hive, bees and all, on either side of the frame having the queen on; when the frames of comb or comb foundation are to be drawn up and the whole number of frames spaced as they should be in any well regulated hive, and the hive closed.

If the season proves favorable the surplus arrangement should be put on this hive a week later, as they will be ready for it by that time. Having finished all that there is to be done with the new hive at the time of dividing, take the old hive and carry it to a new stand, any place you wish it to occupy during the remainder of the season when you will put the four frames of comb or foundation taken out of the new hive in this old hive, pushing the six frames occupied with bees, brood and honey to one side of the hive so that these frames from the new hive may be put in at the other. This is done so as to have the brood all together at one side of the hive so that there will be no danger from chilling, should the weather turn cold, for the larger part of the bees present on the combs will go back to their old stand and into the new hive, on their first flight after this division. Having the frames all arranged in this old hive in "apple pie order," it is to be closed and left for two days when a laying queen is to be given. If you have no laying queen, then give them a virgin queen. And if you do not have the virgin, give a ripe queen-cell. If you have neither of the three, they will raise a queen for themselves; but the queen so reared will come into existence under very unfavorable circumstances, through lack of sufficient bees of all ages to produce the best of queens, and consequently be such an one as will not give the best results. I would not advise dividing bees in any way unless a queen can be given the queenless part in the shape of a ripe cell or otherwise. As soon as the queen in the old hive gets to laying, and the bees have occupied the four frames put in from the new hive, this colony is ready for the supers also.

Colonies can be divided in this way without hunting up the old queen, and giving the new queen or ripe cell to the part which is found queenless two days later, but it is much better to leave the old queen on the old stand in the new hive, as the returning bees will make it so that she can keep right on with her egg laying to the best advantage.

The next plan is to proceed with the new hive to the colony to be divided the same as before, but instead of taking out four frames from the new hive, take out only two. Then open the old hive and take out the frame having the queen on it, and another having some honey in it, setting the two in the center of the new hive, arranging the frames as before and closing the hive. Now lift out four of the frames from the old hive and shake the bees off from them down in front of the entrance to the new hive, into which they will immediately run. Arrange the combs in the old hive and carry it to a new stand giving queen or ripe cell two days later.

The third plan is to proceed the same as in the second, except that you are to shake nearly all of the bees off the eight combs in the old hive, in front of the new hive, when you are to attach a double screen on the bottom of the old hive, the same being made by making a frame out of half-inch stuff the size of the hive, which frame has common window screen wire-cloth nailed on each side of it. Having the screen attached, remove the covering from the top of some populous colony and set the old hive having the screen on its bottom on top of the populous colony, covering the top of this hive as tightly as possible to keep in the heat arising from the colony below. The next day run in a queen or give a ripe cell to the nearly beeless combs, leaving the combs and old hive on top of the populous colony five days longer, when it is to be carried to the stand it is to occupy and the screen removed. In this way we get a larger proportion of the bees in the new hive, and thus secure a larger surplus from it. By any division little or no surplus is secured from the old hive, unless the honey flow is greatly prolonged.

Borodino, N. Y., Feb. 26, 1902.

Queens in the Supers—Bridge Combs.

(By M. F. Reeve.)

IF ANY of the readers of the Bee-Keeper are tempted to discard the zinc honey boards in placing supers either for extracting, or when provided with sections for comb honey in the spring flow, don't let them place too much reliance in the published stories to the effect that queens will not climb into the second story and lay eggs in the cells where there are no boards.

I am speaking from experience when I say they will just do that particular thing. I have tested the matter purposely this spring. I had several supers filled with nicely drawn, half depth comb, left over from last season, which I distributed among nine colonies as soon as the bees began storing. Three supers were left without the honey boards and the others were given that arrangement.

Did the queens get into the second stories? They did, with neatness and dispatch and in two weeks there was the nicest lot of capped drone cells along with brood and queen cells anybody ever saw. The cappings were pure white, too, not brown. I cut out the queen cells, shaved off the cappings of the drone cells with a very sharp knife and the bees did the rest. When I examined the half depth frames mentioned a week later, after honey boards had been placed between the supers and bodies, the drone brood was all gone and the big cells were filled with delic-

LAWRENCE C. MILLER.

ious honey instead of fat, gluttonous drones, etc.

WHY BRIDGE COMBS.

By the way, can any one explain the persistency of colonies in building bridge combs from the bottoms of the deep half-depth extracting frames to the top frames of the brood and honey combs in the main hive body, except upon the theory that the little creatures want a step-ladder arrangement to enable them to reach the upper tier of combs? It may be all right for the workers, but it is mighty inconvenient for the party who has the job of overhauling the supers occasionally. However, the bridge combs come in handy for making starters for sections, the combs being peculiarly clear and white, and apparently much more deceptible to the workers than undrawn foundation. If any one is disposed to doubt this, let him or her try a few sample sections and be convinced. I save all of it that I can get hold of and it is one of Doolittle's wrinkles, too, I believe.

Rutledge, Pa.

Observations of a Youthful Bee=Keeper.

(By Lawrence C. Miller.)

UNTL about a year ago my only interest in bees was eating the honey I got without stings. Occasionally I helped my father with his bees and last June he gave me a colony. As there are many small children near where we live I was obliged to place the hive in an upper room in the house and arange it so that the bees could fly out of the window.

I had the hive arranged with glass sides in the surplus cases and the neighbor's children would flock up almost every day to watch the bees. Later in the year I took charge of my father's apiary, near Providence, and enjoyed it, and the idea of being braver than the other boys, very much, even more than I expected. When I began to get cash for honey from my own colony I became more interested and when Mr. Hill asked me for an article, I felt as if I was really becoming a bee-keeper. This year I am going to make a business of it and devote all my time out of school to it. My father assists and helps me with his knowledge. I have got a hive which is a combination of the best features of the leading hives. The hive is easily handled and is very warm. I shall produce all my honey exclusively in the 4x5 sections.

Last year I sold all my honey to the consumers, and all of the honey from the Providence apiary that we could spare. Some of the questions asked by people were very amusing, while others were exceedingly annoying. One lady asked me if I took the honey and put it in the comb, while another wanted to know if I mixed water or some kind of syrup with the extracted honey. I find that most everyone likes comb honey the best.

Newton Center, Mass., March 9, 1901.

THE LANGSTROTH HIVE.

AN OLD BEE-KEEPER ARISES IN ITS DEFENSE.

(By John M. Davis.)

IT SEEMS to me that friend Kerr, page 3, 1902, A. B. K., is reasoning from an erroneous basis. Generally his ideas are good, so far as I have observed, but I beg leave to differ very materially with him on this hive question. I bought my first Langstroth hive during the winter of '68-'69. Since then many styles of movable-frame hives have been patented and lauded to the skies through our bee journals. I could furnish Brother Kerr many cuts of them from my old files of bee journals. Like the mushroom, they flourished for a day and died, but the Langstroth, like the rock of Gibraltar, stands as firmly today, as when first given to the world by Father Langstroth, about half a century ago, and is spreading over the entire civilized world, like a prairie on fire.

Probably Mr. Kerr will say: Oh, this is because manufacturers push them. I assent: Yes, they push them, because they sell, and they sell because they give satisfaction. Lumber is getting scarce and high, but through this section thousands of tons of nice wheat straw is burned or rots. Why not manufacture this into old style straw skeps? Simply because no one would buy them. I think, like Brother Kerr, that the Langstroth hive has some faults, but I have never found a hive that did not have more. All the gilt-edge brain power that has been brought to bear on the subject has not improved upon its general principles. Since Father Langstroth put the finishing touch on with his master hand.

The long, shallow frame gives just what was wanted half a century ago, and is yet appreciated—the surplus receptacles right down on the brood chamber so spread out as to utilize the heat thereof to the best advantage.

Now, Brother Kerr, that box-hive comparison shocks my old rheumatic bones fearfully. I don't believe you would thus injure me knowingly.

The idea of the box-hive being used by "bee-keepers!" I arise in their defense and say that Brother Kerr is mistaken, and demand that they be pointed out. Is it Hetherington, Elwood, the Coggshalls, McIntire, and others of the west: our Florida cousins, or was it Osborne, the Cuban? Nay! Even Rambler in all his travels, failed to find "ye" box-hive "bee-keeper."

True, many bees are found in box-hives, nail-kegs, cracker boxes, and even round log gums, but they keep themselves and are not kept, or owned by practical apiarists; and few of their owners know that the "king" is a "queen."

When you compare hives, Brother Kerr, don't look around under hen roosts, but go to the practical apiarist, who makes the business a bread and meat affair, and see what hive they use and I will guarantee that if all the other styles of hives in use in America were knocked down, they could be stored in the supers of the Langstroth hives in use, and not materially interfere with the storing of surplus honey. Men do not adopt a special make of a plow, mower or self binder, nor a bee hive through sentiment, but on account of their adaptability to the work for which they were intended. I have carefully investigated the claims of all the competing hives, hoping to find a more perfect hive than the Langstroth, but have failed so far, unless my judgment is at fault.

As to queen nurseries, that is a separate business. Many queen breeders use a special-sized small frame, not found in any make of hive. Others use their regular hive frames, regardless of make or size. If nuclei are kept as strong as they should be to develop the best queens, the L. frame is all right.

A queen developed in a strong necleus will commence laying 24 to 36 hours sooner than one in a very weak nucleus, thus proving the strong nuclei best.

We should be careful not to lead beginners astray. Before I bought the Langstroth I lost both money and time on worthless patent hives.

The hives named by Friend Kerr, however, are in my opinion, good hives, but if I thought them best, I would be using them.

In conclusion, I beg to advise that I offer no hives for sale, therefore do not write this from a dealer's standpoint, and am in no way interested in the manufacture or sale of any hive.

Spring Hill, Tenn., Jan. 25, 1902.

Relating to Foul Brood.

(By W. T. Stephenson.)

"FOUL, Broody" Straws: From my far more extensive, than desirable experience, with the great bee plague—foul brood—I have found these points to be invariable. Possibly they may be of interest to some one.

When a colony becomes infected with foul brood the bees are very irritable. They are very offensive toward everything—inanimate objects as well as living.

I had a foul broody apiary located near a by-road, and the bees stung my neighbors and their horses so badly that they were compelled to quit passing the apiary. I had to don a wire-cloth veil, which had previously been unncessary. They were particularly malicious toward anything black. If I chanced to open the smoker a swarm of angry bees would immediately attack it, dozens falling into the fire box. Here is what I believe to be the cause of the illenss: The bees are constantly removing the dead larvae, and they get more or less of the deadly germs into their stomach, which makes them like a man drunk on bad whiskey—showing nothing but the very worst spirit they possess.

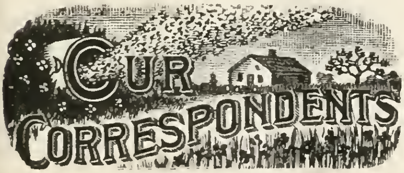
In treating the disease, strong colonies are very important. Their value can hardly be overestimated.

They seem, and eventually do have a power to ward off disease, where weak colonies, composed of old bees, would be a fertile field for its development.

Full sheets of foundation are of more value in treating foul brood than many suppose. In fact, it is impossible (with me) to affect a cure when using only starters. We always want to know the "why and wherefore" of all things. Here is the (my) reason why we cannot cure foul frood when using starters. When using full sheets a large surface is furnished to commence comb-building on, therefore a large number of cells are started at once, and, before they are of the right depth for the bees to store honey in, all of the diseased honey is converted into wax. If, on the other hand, starters two or three inches wide are used, the bees start little "spears" of comb, which are so small, that before all the infected honey is used the cells are deep enough, and the foul broody honey is stored in the cells, which again starts the disease.

There are a dozen different methods of treatment, all of which are guaranteed to "kill or cure." There are so many different plans that a beginner, unless he "watches closely," will be using a part of several methods. The result is, no cure is affected, and he despairingly leaves the bees to their inevitable doom. I doubt if a more efficient method than the McEvoy has been discovered. Its originator is a man who has had an extensive experience with foul brood, and also with bees in general. I will have to admit that some time ago I failed to affect a satisfactory cure with the McEvoy method, but I didn't follow the directions closely enough. You know, the treatment of foul brood is a business of details. Even if I didn't succeed with it, Mr. McEvoy has cured thousands of colonies by his method in Canada. Surely localities do not differ in regard to foul brood.

New Columbia, Ill., July 1, 1901.



Do Bees Hear?

Hill, N. H., March 5, 1902.

Editor American Bee-Keeper:

Dear Sir: I have been a reader of your paper for a short time and like it very much. It is well worth what it costs to any one that keeps bees. I keep quite a lot of bees and could keep a good many more, but the people about here have wanted to buy all that I would sell. Most of the bees here are black and all were until I got some Italians, four years ago, and that is why I have had a chance to sell so many. I also rear my own queens. I imported some from Italy last year: they were fine looking bees, and great workers—far ahead of the blacks.

I don't very often write anything to be put in print. I can talk on this subject much easier than I can write.

We had a great crop of honey here last year, the largest I ever knew for this place. Some colonies that cast a swarm the last of May made 75 pounds surplus. I recently saw a piece in a bee journal and the writer asked the question, "Do Bees Hear?" and he made answer, no, and tried to prove it, but it did not seem right to me to answer it in that way. Now, I should say bees do hear. If not, why, after a hive of bees cast a first swarm, in eight or ten days you will hear in the parent hive, if you listen, in the evening, and you can also hear it in the day time, a day or two before a second swarm is to come out, if the colony should swarm twice, the piping of the young queen, and following this sound you hear it answered by another muffled sound from a queen in a cell not hatched. If they can not hear, what is all this for? And if the queens can hear, why not the workers, for they are nothing but undeveloped females. There is one other proof, and that is, when you hive a swarm you shake a few bees down a little way from the hive and they will crawl in every direction, but you shake a few more close to the entrance, and they will tip up on their heads and flutter their wings and by so doing make quite a noise. You will see the first lot start for the hive like a flock of sheep for their pen, and why? Because they hear.

We see a good deal in the papers nowadays about mating queens in confinement. Now, as I said awhile ago, I am the only one here that has Italian bees and I have been troubled but little with having my queens mate with black bees—only one last year. There is an apiary of blacks only one mile from me of fifteen colonies and not a hive of them showed a trace of Italian blood last fall, so it does not look as though we should get all out of pure stock even if it were not mated in confinement, but I hope to see it done that way, for it would then be a sure thing and a great saving in labor where there were bees very near, or in the same yard of another kind. Yours,

Chas. W. Cilley.

P. S.—My bees wintered well.

C. W. C.

THE SEASONING SERIES
MANY THINGS BY SEASONINGS SEASONED ARE
By Deacon Hardscrabble

Dear Brother Hill:

Did you read the American Bee Journal for February 13? If not then just hear what "Old Grimes" had to say about me. "Bee-keeping is surely a new wrinkle"—after all my years at it, "When John was married to his first wife"—what do you suppose he has been drinking?—"See here Mr. Grimes your bees are eating up all our grapes"—never called him mister in my life—then he goes on to tell how I "fired away $3 worth of powder and shot" to save $3 worth of grapes, killing a lot of linnets, orioles, etc., and then tells how he used to shoot king birds—I'd like to have seen him. He winds up with these words—"And then a deacon in the church—you must have fallen in, John." Phew! Now I know why he never even fell into a church. Why I haven't lived near him since we were boys. And it stretches my smile to its utmost to hear him talk about birds. Bless his dear soul, he never could tell a linnet from a sparrow, or a tanager from a cardinal bird: and when he talks about shooting the little fellows I've a mind to tell you how many hours he spent trying to shoot some of the bright feathered ones for his best girl's hat. However let me tell you in a quiet aside that she always had to buy what she wore. I wonder if he never heard that most of the small birds that are killed are shot because there is a big demand for them for millinery purposes. Wonder if he ever heard of the Audubon Society which is trying to educate women of our land above such savage customs?

Bully for W. W. McNeal! He and W. S. Hart are after the chief danger to extracted honey. Boost 'em along.

I got a letter t'other day from a droll chap up in the Keystone state who is too bashful to give his name but just signed "Nim Crinkle." The "Crinkles" were there all right. First he is living in the days of the old Mutual Admiration Society and seems to think it still exists. Because some contributors are given precedence and are unduly praised (we'll agree with him there) he thinks certain bee papers "are rotten to the core" and that the editors "can't tell an honest man when he is pointed out." He goes on to say that if some of the boys do as they say they do and at the same time keep up the same amount of writing, they would need 600 days in each year and a wife and ten children (who don't count) to do what "one man does alone" in 365 days. Nim is not so far off there, is he? Then Nim gets after that Chicago editor and asks what he knows about bee-keeping from experience. That's a poser, isn't it? Well, Nim must remember that in spite of short comings in the editorials and a meagre knowledge of geography, and inability to always find room for the dates of letters and a dozen or so other vagaries, that editor manages to get out a fairly readable journal—even if 'tisnt all original matter.

Parenthetically while writing of journals, how the Progressive does show the loss of Will Ward Mitchell's able hand. It used to be like summer dreams (somnambulist and all) but if the simile holds good then the December number was a nightmare. But when one gets to looking about for real bee papers, where are they? Most of them are pseudo-social-farming-religious-poultry-psychological-real estate etc., publications. They call themselves "bee papers" and then mix in a lot of mediocre material which some of us don't believe and many of us are not interested in—or if we are we get the best papers specially devoted to the topic—and then make us pay for the mixture if we want what bee news they contain. When we remonstrate they ask if we are not getting full value for our money? No! Not as values go in the literary world today.

Now if you ask why I don't start a paper myself, I'll take the first train over and we'll have it out. No siree, it's more fun to sit here and "swat" flies—and other folks. That word "swat" is one of Nim's. How do you like it? Expressive, isn't it?

Yours as ever,
John Hardscrabble.

THE Bee-Keeping World

BOHEMIA.

The things to be remembered in the winter management of bees, Fobisch says in Bienenvater, are quietness, absence of moisture, prevention of combs becoming mouldy, sufficient ventilation, protection against wind and the rays of the sun, in particular as to their striking the entrance. This latter is of greater importance with German than with American hives, as the former have their entrance away above the bottom board, and the rays of the sun would have more of a tendency to entice the bees to fly than is the case with hives like those used here.

Recipe of a gall cure, given in Boh. Bienenvater; also good for sore neck or other raw sores caused by harness rubbing, etc.: Pine-pitch, 20 gram.; beeswax, 20 gram.; honey, 20 gram.; fresh lard, 350 gram. Melt ingredients over gentle fire; apply often.

Schusser has the following to say in the Bienenvater: It would be a great mistake for anyone to think he knew all about bee-keeping, and yet there seem to be some that do. We are constantly moving onward and the one who does not keep his eyes and ears open will soon be behind in the race. Every bee-keeper must keep posted and there is no better way than to study the apicultural literature. Subscribe for several bee periodicals, is his advice.

Feeding bees during the winter is not recommended in B. V., but if necessary may be done by giving candied honey done up in paper and placed over the cluster of bees. If bee-candy is given, water also should be furnished. The best and safest way is to substitute full combs of honey for empty ones.

The artificial comb (foundation) is accused and held responsible in Bienenvater for causing the death of many colonies. It is claimed that when bees build their own combs, they always leave holes for communication, but not so when foundation is used. Severe cold weather compels bees to cluster closely in the more central part of the hive when the bees in the different spaces cannot communicate with one another, which proves fatal many a time; as the bees in the outside spaces cannot follow up if it should be necessary and they perish. It is therefore advisable to cut passage ways through all the combs.

Fobisch writes in Bienenvater of Bohemia: There is no better bee for our country than the native Bohemian bee (which is of the same type as the common brown or black German bee). Some may advocate and advertise a better, a more handsome bee, with foreign blood, and they really attempt to make us believe that bee-keeping is nowhere without such; but that is all bosh. There is no reasonable excuse for substituting other bees in place of our good, industrious and hardy native bee. It is poor economy to throw away money for these foreigners.

GERMANY.

Mr. Weygandt said at a bee-keepers' convention in Erfurt, that the Norwegian bee suited him best as a bee for honey-production. He had tested all or most all the other breeds for many years and had finally settled on the Norwegian.

Maeterlink's interesting bee-book has been translated into the German, and is now highly commented upon by German writers.

The bee-keepers of the Schwarzwald have good reason to smile this year. Their honey flow lasted from June to the last of August. Strong colonies gathered 100 pounds surplus. Some colonies that did not have sufficient room built comb on the outside of their hives and filled them with honey.

That total shade is beneficial to bees is stated by Ebster, in Leipz. Bienen Zeitung. (We have been rather unfortunate in wintering colonies in total shade, especially when they were facing north.)

"When do we find our hives without brood?" This question is inswered in Leipz. Bien. Zetung, as follows: In afterswarms brood is quite often found till clear into November, but surely none in December and during the larger part of January. Many times colonies are found as early as October without brood, but it is not the rule. (In Western-Central New York, brood-rearing comes to an end about Sept. 20, and the majority of our colonies have no brood by October 15.

Horses are sometimes stung to death, and similar accidents happen occasionally where bees are kept in large numbers. The bee-keeper may have to pay for damage done in such instances. The bee-keepers in Germany may insure against such casualties by paying a small insurance premium (1 1-3 cents) per hive. Special insurance companies are organized for this purpose.

Fleishman enumerates 118 different bee periodicals as being the number kept throughout the world. Austria has 19, Germany 19, Suxemburg 1, Spain 1, Belgium 10, Netherlands 1, Sweden 2, Denmark 2, Russia 2, America 18, Australia 1. Especial mention is made of the Brazilian Bienenphlege, a bee paper of Brazil, printed in German.

In order to improve our stock of bees Distler says, in Phaelzer Bienen Zeitung, that best results can only be accomplished by judicious inbreeding. We will have to overcome some difficulties and meet with some failures, but if we will carefully select the best to breed from, we will surely make some gain. Distler's idea is to breed queens and plenty of drones from our best tested colonies, and never use any queen for breeding, unless she shows the desired superior qualities. It would be singular, he says, if bee-keepers should not succeed in improving their stock, and, in a measure, also that of their neighbors.

The past honey season has been exceptional in so far as the red clover has yielded considerable honey, which the bees have been able to appropriate. Austria, America, Germany and other countries report the same occurrence in this respect. (Are these exceptional honey yields due to the long tongues, the superior stock of bees, or to some other favorable conditions? I believe the question is easily answered.) Answer it then, Mr. Greiner.—Ed.

A book on horticulture, written in 1723, in Germany, by Dahuron, contains in an annex a long chapter on bee-keeping. The writer had apparently some correct knowledge of the bee and its natural history, although he makes many mistakes and weaves in myth. About curing queenlessness, for instance, he says: "Go to a healthy, strong colony, cut out two pieces of comb containing young brood, each as large as a hand or larger, take along the adhering bees. Cut out from the afflicted hive similar pieces of comb and substitute the others with the brood. The bees from the healthy hive bring with them the faculty of raising a new king. This they accomplish in about fourteen days."

Extracted clover honey brings about 25 to 30 cents per pound in Germany.

The leading German bee-keepers have a good deal to say about us Americans wintering so poorly. Indeed, it's generally believed that we have not yet learned to master this problem. From all that is said, one would be led to think that the German bee-keepers understand the matter in all its details, and are generally successful in wintering their bees. The fact however, is they seem to have as much, or more, trouble than we have. The wintering question, I find, little discussed in American journals. It is not a burning question any more. On the other hand every German journal devotes page after page to this subject, lamenting over the many bees dying with dysentery, by suffocation or lack of water to quench their thirst. (The German bee-keepers seem to be very thirsty souls themselves and evidetly think their bees have an equal weakness; at any rate their winter arrangements are not complete unless their bees are furnished a bottle.)

It is a great mistake, says Melzer, in Central Blatt, to suppose that stunted or dwarfed blossoms of red clover will ever secrete nectar and thus enable the bees to work on clover to advantage. Such blossoms furnish no honey. When bees gather honey from red clover blossoms, either the nectar has risen to within their reach, or bumblebees and other insects have first cut holes through the long tubes at their bases, which they often do to obtain the sweets.

Dr. Donhof writes in Illustr. Flora that a queen-bee larva increases 1,500 times its weight during the first five days of its life, and should an infant increase in weight at that same rate the child would weigh anywhere between 9,000 and 12,000 pounds when five days old.

F. Dickel explains in "Die Biene," the advantages and disadvantages of early and frequent flights of bees during winter. He rather favors a steady winter with no flights and thinks if bees can be kept quiet and undisturbed, there will be no breeding and little consumption of honey, both very desirable and conducive to good wintering. Then, when spring comes, they will quickly breed up and develop into profitable colonies.

The American system of bee-keeping and in particular our American hives are often severely criticised in German bee journals. Mr. Stachelhausen and myself have at different times defended and explained our system and tried to show the German readers wherein the advantages of our hives lie. It seems these efforts have been effective, at least, in a measure. I find, that the hives accessible from the top are on the increase. The Gerstung hive is making many friends. A straw hive with open top for tiering up, fitted up with frames has been described within a few years, etc. Four or five years ago I explained a system of comb-honey production by the help of shallow, small brood-chambers in one of Germany's bee journals. I scarcely had hopes anyone in Germany would think of trying it, but, on the contrary, I find that just now a shallow-chamber hive is coming to the front, somewhat similar to the Heddon and Danzenbaker hives. Unfortunately the inventor has seen fit to follow his own ideas in the construction of that hive, instead of patterning closely after such, as had been built by American bee-masters and found good. The result will be a waste of material and labor, also dissatisfaction on the part of those buying and trying such faulty hives. The ordinary square edge of our hives did not suit the inventor; his hive telescopes and thus forms a veritable bee-trap, a regular bee-killer. The frames of his hive are of the fixed-distance order, but have not, like the Heddon, closed ends. However, they fit tightly into the hive endwise. As long as the hive is new or has no bees in it, it will work all right, but after the bees have had a chance to fix things to their notion, it will be practically impossible to manipulate brood-chambers and frames. Yet it is claimed that it is a hive for the masses, destined to make bee-keeping popular, a hive easy to operate, etc.

AUSTRIA.

From Bienenvater (Vienna): Koller asserts that buckwheat honey produces dysentery in winter, but other bee-keepers do not agree with him. Dzierzon pronounces it the very best winter food, and the bees of the writer are wintered every year largely on such honey without any bad results.

F. Greiner.

DEPARTAMENTO DE ESPAÑOL.

AVISO.

Hemos obtenido una serie de conferencias dadas por el Dr. G. Garcia Vieta á sus alumnos de apicultura y nos complacemos en irlas publicando á la par que el Guia del Apicultor Cubano del Dr. J. Pons. Nuestros suscritores apreciaran este nuevo esfuerzo nuestro para darle al “American Bee-Keeper” todo el interés y mérito posible.—(El Editor.)

PRIMERA CONFERENCIA.

Sres:

Como veis, á la sombra de unos mamoncillos, ha colocado este campesino sus cajas de colmenas, que el llama corchos.

El esmerado cuidado que tiene en barrer las hojas y el no permitir que la mas minima yerba crezca en su colmenar, asi como esos trozos de madera formando rusticos bancos sobre los que ha puesto sus cajas á un paso una de otra, son, unido á la recojida de la cera en aquellas que se le pierden, el unico trabajo que este apiario primitivo dá á su dueño, á excepción de los dias de castra y de la captura de los enjambres.

Cuatro tablas de un pié de ancho y aproximadamente cuatro de largo, clavadas entre sí formando un cajon largo y estrecho, descubierto en sus extremos, constituye sobre la mitad de las cajas de este colmenar; la otra mitad son simples porciones de troncos de cedro. jobo, palma y dagame u otro arbol hueco, cuyas dimensiones varian sin bajar de dos pies de largo ni pasar tampoco de los mismes cuatro que tienen las hechas con tablas.

Estas pequeñas is dirá su dueño que botan muchos enjambres, mientras que por el contrario, aquella grande, que rindió bastante miel por cierto en las castras pasadas, solo ha dado dos en tres años .

El lo atribuye á las abejas de esa colonia.

Si le dijerais que dependia de la caja en sí, veriais qué pronto la cambiaria por otra mas pequeña. En esto, como en otras muchas cosas, está en error. La caja grande, bastante espaciosa para que en ella se alojen de cincuenta á sesenta mil abejas, lucha con las ventajas que dá la fortaleza. Pequeña, falta de potencia, como sucede en las demasiado chicas, no solo pueden apenas atesorar miel en ellas por falta material de espacio, sino que. la reina es detenida en su postura por no tener panales suficientes para desarrollar su cria. Es cierto que la falta de capacidad provoca la enjambrazon ó salida de enjambres, pero estos son pequeños, y fijaos bien en el siguiente aforismo del que deseo se compenetren Vdes. Aforismo del que puede decirse que encierra en sí toda la ciencia ápica: “Keep your colonies strong” (Guarda tus colonias potentes).

Precisamente tenemos en la actualidad dos de estos corchos vacíos de abejas, y no vistos aun por el amo ocupando por consiguiente el mismo sitio en que los tenia.

Este. mas cercano, tiene, una infinidad de abejas muer tas y además en el fondo y delante de ambas aberturas de los extremos existe abundante polvo blanco que veis parecido á aserrin y que no es otra cosa que cera desmenuzada

Víctima de lo que aqui llaman una comilona, fué atacada esta colmena por las demás. Sus panales completamente vacios de miel, solo tienen lo que conocemos con el nombre de “cria sellada” y que son aquellas celdas que contienen una ninfa debajo de un sello u opérculo abovedado, con que las abejas la han cubierto aislándola del mundo exterior y que ella no rompe hasta terminar su transformacion en insecto perfecto. Al séptimo dia, sellan la larva que empieza entonces a tejer su cocón, se convierte en ninfa y rompe el opérculo catorce dias despues.

Pero volviendo al corcho perdido que observamos, vemos que la otra cria, ya en estado de huevo ó ya en el de larva. tambien ha sido devorada por su feroces asaltantes.

Diagnosticar á priori la causa del robo que dió origen á la destrucción de esta colmena es fácil en este caso.

La cria sellada, unico vestigio que nos queda para ello, está como veis, esparcida. salteada. no contigua ni formando un solo bloc en los panales que la contienen.

La reina de esta caja era por lo tanto vieja. ponia poco y mal. La colonia fué debilitandose lentamente hasta que falta de defensores suficientes pudo ser fácil víctima de sus poderosas vecinas.

La edad de la reina, que alcanza á cuatro años. influye notablemente en su manera de poner, siendo rara la que despues de los dos años mantiene su postura hasta dos ó tres mil huevos diarios, máximum que alcanzan generalmente estas abejas negras oriundas de España y llamadas en Cuba. de Castilla.

Una de las principales razones por las que me vereis cultivar la raza Italiana. es por que con ella obtenemos reinas que ponen hasta cuatro mil huevos al dia.

Despues que la reina pasa del segundo año, disminuye el numero de huevos que pone diariamente.

Este panal que ante vuestros ojos está. conserva su cria sellada salteada y con este solo detalle. califico la reina que aqui estuvo, de vieja.

No quiero decir, que con la edad solo ponen las reinas en celdas separadas entre si. No. Ella en este mismo panal tenia cria de diferentes edades. Hubieseis visto, á no sufrir el pillaje que la exterminó, huevos de un dia. larvas de varios dias y cria sellada. Larvas y huevos fueron devorados; solo permaneció la cria sellada que no halaga al paladar de las ladronas y nos bastó para Diagnosticar en esta caja: "Muerte por pillaje, debido á debilidad de la caja por tener reina vieja."

Si este apiario hubiese sido de panales movibles y atendido por un apicultor, ya por la manera de poner la reina, ya por sus libros, habria comprendido la necesidad de sustituirla por otra nueva ó joven.

Aun abandonadas a si mismas. las abejas suel en reemplazar sus reinas viejas.

Forman nuevos huevos de reina y al sellar estos matan la vieja.

Sin embargo se dan casos en que la dejan vivir hasta que alguna de las hijas nace y en otros muy raros, aun despues de ser fecundadas estas y estar ya poniendo en la caja, suele encontrarse la madre tambien en ella.

Este hecho es poco conocido de los apicultores, que no saben explicarse como. á pesar de la rivalidad sin cuartel que existe entre las reinas. ven alguna que otra rara vez, dos en una misma caja; ambas fecundas y ambas poniendo.

Inspeccionando la segunda colmena desierta, vemos que sus panales estan cubiertos de gusanos y pululan en ellos pequeñas mariposas nocturnas grises.

El dueño de este colmenar rustico, nos diria que el enjambre de este corcho "Se fué huyendo de la traza que le cayó."

!Pobre enjambre! No se fué. Lentamente aniquiladas las obreras cada vez mas escasas, solo un cada dia mayor numero de zánganos aumentaban en su hogar las necesidades, sin que una sola obrera viniese á reforzar el considerable ejercito necesario en cada colonia para atender á las mismas, entre las que figuran ademas de la recolecta de la miel y pólen, la custodia y defensa de la caja que tiene entre otros enemigos precisamente "La galleria cereana" mariposa productora del gusano de la cera, que es el que aqui veis y el que precepitó su destrucción, por que aun sin él está colonia estaba fatalmente destinada á desaparecer en plazo próximo por ser su reina de las llamandas Zanganeras.

Como sabeis. la reina tiene su orígen en un huevo exactamente igual al que por sucesivas transformaciones en larva, crisálida ó ninfa é insecto perfecto, se convierte en obrera.

Esta, como aquella. es hembra; solo que desarrollada en celda estrecha y con alimentación mas sencílla, resulta de menor tamaño, con los organos genitales atrofiados é incapaz para la fecundación y reproducción.

No asi la reina, cuya celda aumentan de capicidad las abejas, llegando á simular un maní y cuya alimentación suculenta y ligeramente ácida contribuye con el mayor espacio en que se incuba. á formarla hembra perfecta, con sus organos genitales en completo estado de desarrollo. capaz de ser fecundada y de reproducirse.

Pocos dias despues de nacida sale de

su caja en busca de las caricias del macho.

Despues del medio dia, cuando la temperatura es mas elevada y durante nuestras hermosas y apacibles tardes, habran Vds. oido como el suave murmullo del colmenar aumenta hasta el extremo de llamar vuestra atención. Debese á los zanganos que con vuelo lento y zumbon toman perezosamente el sol frente á sus respectivas cajas.

Entonces y mientras la mayoria de las abejas de su colonia se precipitan alegres y bulliciosas hácia la entrada, permaneciendo alli, pero no quietas sino correteando de un lado para otro, entrando á veces para salir en el acto, sale la reina y después de varios circulos exéntricos, que tienen por objeto fijar la posición de su casa y asegurarse para hallar la á su vuelta, pasa virgén y coquetona una y otra vez delante y al rededor de los zanganos hasta que incitados la siguen. Ella presurosa huye veloz, siendo el premio para el mas lijero, medio, de que se vale la naturaleza para la selección.

El afortunado entre sus rivales paga empero con su vida el tributo á su amor, pues deja colgando sus organos genitales en la vulva de su amante de un segundo, pero que le será fiel hasta la muerte pues queda fecundada por el resto de su vida.

La reina dá tanto viajes nupciales como le sean necesarios para ser fecundada; pero si pasan sobre veinte y cinco ó treinta dias y ya por falta de zánganos, dias continuados de lluvia ó viento, ó algun defectó físico en ella, esta fecundación no se realiza, desiste de lograrla, pues se ha hecho imposible y ella, apesar de su virginidad, se decide á poner en las celdas que limpias y listas le tienen preparadas las ansiosas obreras.

Existe una ley descrita por Dzierzon, llamada parthenogénesis, de partheno virgen y génesis reproducción, en virtud de cuya ley, ciertos insectos se reproducen sin prévia fecundación y nuestras reinas en cuestion la siguen, pero de un modo imcompleto pues solo logran reproducirse en la especie macho. Reinas vírgenes solo dan zanganos, de aqui el nombre de zanganeras que reciben.

En cambio las fecundades, producen obreras si depositan sus huevos en las celdas estrechas llamadas de obreras y por el contrario si el huevo es colocado en celdas anchas y grandes como estas que veis, resultaran zanganos.

En esta colmena perdida que observamos, la reina era virgen y en vano intentaba lograr obreras poniendo en las celdas que corresponden á estas.

Todos nacen machos, Para permitir el desarrollo de zánganos en celdas pequeñas de oberas, las abejas se ven precisadas á alargarlas sobre el nivel de las demás, hacerles sobresalientes y como ademas estan puestos con celdas vacias intermedias, presenta el panal un cuadro que no olvidareis jamas y que os permitará siempre asegurar sin titubear que la colonia que los presentan tiene una reina zanganera.

En vuestras hábiles manos no habriais dejado perder esta caja, pues como en el caso anterior, os hubiese bastado sustituir su reina por otra fecunda y que no hubiese estado en el caso de esta, que solo cria esos seres, de los que con razon podemos decir: "Que no tienen padre, que son hijos de susabuelo y que jamás conocen á sus hijos." Me refiero al zangano.

G. García Vieta.

Tenemos una lista completa de los apicultores de la Provincia de Santa Clara, pero quisieramos poseer los nombres de todos los apicultores de Cuba. A todo aquel que nos envié una lista de diez apicultores, fuera de la Provincia de Santa Clara, mandaremos el American Bee-Keeper un año entero gratis. ti

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Editorial

April and May, of all months, are the ones in which the retention of heat in the hive should be given especial attention. A loss of the animal heat generated at this season is a loss of brood, bees and honey.

The Bee-Keeper notes with pleasure that Prof. Frank Benton has been appointed Apicultural Investigator in the agricultural department at Washington. Prof. Benton is eminently qualified to serve our apicultural interests in whatever capacity; and his recent advancement is a fitting recognition of his long and faithful service of the government, as assistant entomologist.

A slight delay in mailing this number of The Bee-Keeper, and an abbreviation of this department, is a result of the editor's absence. It was our pleasure during the past month to make the personal acquaintance of Mr. D. E. Merrill, of The W. T. Falconer Mfg. Co., who has been spending several weeks in the South; and it was a very pleasant duty to accept a kind invitation, extended by the publishers of The Bee-Keeper, to accompany Mr. Merrill on a trip to several of the charming resorts of South Florida and Cuba.

Subscriptions are coming in at a rate that is truly gratifying to the editor. We desire to double our present list during 1902; and as a token of appreciation, to every reader sending us one new subscriber, together with 50 cents for same, we will mail free one beautiful photograph mounted 8x10 inches, of either a Florida or Cuban scene. The editor has a collection of several hundred negatives taken by himself, from which to select, and is confident of his ability to choose something which will please each and every one who may send us a new subscriber. When writing, please state your preference.

One of the interesting sights of the old city of Havana is Colon cathedral, which for many years was the resting place of the (supposed) remains of Columbus. Few, however, of those who throng its immense portals to celebrate mass or on curiosity bent, appear to notice a small aperture, apparently caused by the crumbling of the stone, and from which protrude several combs, blacker, if possible, than the robes of the officiating "Padres" within, and from which the bees of an established colony pass in and out. The cathedral colony has its entrance just to the right and slightly above the door of the tower from which the passing hours are proclaimed and echo from the walls of Morro.

Easter Meanings.

"What's the meaning of Easter?"
I asked of a bee,
Who was flying quite blithely
All round about me;
But he only hummed as he floated by,
And looked at me saucily from a small eye.

"Come explain to me Easter"
To a lily I said:
There came but this answer—
A nod of the head.
And the flower on its stalk swung stately and grand;
But what was it saying, who could understand?
Then I asked of the south wind,
This query again:
"Canst thou tell me of Easter?"
Alas! all in vain;
For the wind only whistled its answer to me,
Which made it no plainer than blossom or bee.

Then I said to myself,
This Easter 'tis plain,
Hath brought back to earth
It's beauty again.
It makes the bee hum and the lily to sway,
And old earth to grow young as the south wind doth play.
And thus whilst the lily was nodding to me,
And the gaybee was humming 'round flower and tree,
And the south wind was whistling in rollicking glee,
They all were revealing, as plain as could be,
That Easter is here—that Easter means life;
Bringing Joy out of death, and Peace out of strife.

G. M. Howard, in Florida Magazine.

HONEY AND BEESWAX MARKET.

Buffalo, N. Y., March 7.—Demand for honey is very quiet, with fair supply. Fancy comb, we quote 14 to 15c; extracted, 5 to 6c. Beeswax is in good demand with short supply. Demand for honey is decreasing very much and requires sharp pushing to sell.

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Kansas City, Mo., March 8.—Demand for honey is light with large supply of comb. We have had a few cases of Colorado and California comb honey on the market during last month, and prices are lower. We quote: Comb, 11 to 12 1-2c; extracted, 6 to 7c. Good demand for beeswax at 30c.

Hamblin & Sappington.

Boston, Mass., March 8.—We beg to report a fairly good spring demand for comb honey, and from present indications stocks will clean up in good shape. Prices range as follows: Fancy, 16c; No. 1, 13 to 14c; No. 2, none. Extracted is in good supply and moves slowly; California, 7 1-2c.

Blake, Scott & Lee.

Chicago, Ill., March 8.—The decline noted in last quotations are still more pronounced at this time, large offerings of Western comb are pressing for consumption, which are difficult to place. Prices are nominally 13 to 14 cents for best white, with travel stained and light amber, 10 to 12 cents; that which is candied, selling as low as 7c, with the partially candied at 9 to 10 cents. No great amount of dark honey is offered. Extracted is steady in price, but slow of sale, white, 5 1-2c to 7c: amber, 5 1-4c to 5 3-4c; dark, 5c; according to what it is gathered from and quality. Beeswax in great demand at 30 cents.

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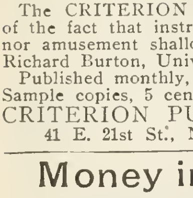

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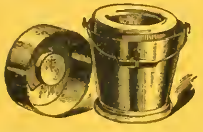

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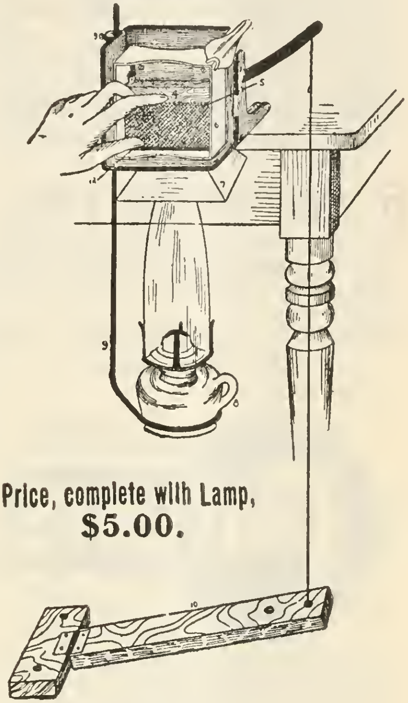

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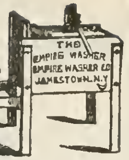

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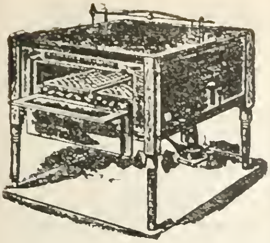

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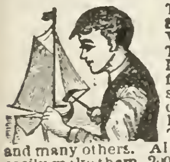

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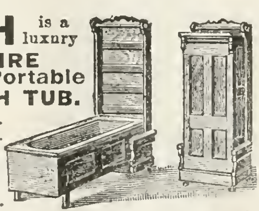

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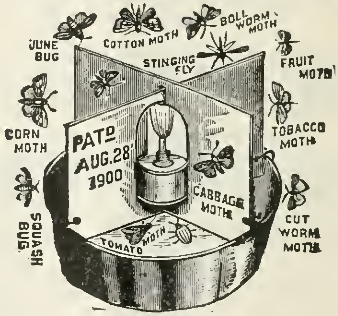

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THE AMERICAN BEE-KEEPER

Published Monthly by The W. T. Falconer Mfg. Co.

Vol. XII MAY 1902 No. 5

HEART OF THE SPRINGTIME.

There is bloom upon the orchard
  And the birds with joy are singing;
Fragrance rare upon the breezes
  And the bees 'mid sweetness winging;
Meadows soft and green, inviting,
  With their carpets of rank clover,
And sweet May has flung her mantle
  Of delight the broad fields over.

Sunny dandelions springing
  From the meadows, bright and yellow,
Like a million suns a-shining
  With a glow subdued and mellow;
And upon the meadow's bosom,
  Resting close, in sweet confusion,
Modest violets are scattered
  In a prodigal profusion.

From the mountain spicy odors
  On the vagrant breezes floating;
And the distance softened ditties
  Of the pigeons' happy gloating;
Through the vale the rippling music
  Of the brook, aye winding, turning,
As it hurries to the river
  With its eager Ocean yearning.

Everywhere are hope's sweet tokens—
  Promises of autumn's reaping;
Fruitfulness in bloom and beauty
  Waking from its winter sleeping.
And we yield to May our homage
  With a grateful heart and willing
For the pleasures that her bounty
  In the lap of spring is spilling.

—Selected.

FOUL BROOD.

Something of the Characteristics and Treatment of the Disease—Drugs for Foul Brood and Paralysis.

(By Adrian Getaz.)

MR. TENOUILLET, president of the Agricultural Society of Haute, Savoie, France, read a paper concerning the methods of curing foul-brood. Among others he gives the following remedies:

Formic Acid.—Pour into the cells of an empty comb, on one side only, a mixture of ten grams of formic acid and 90 grams of water. Place two combs thus prepared in the diseased colony, one on each side of the brood-nest. Renew every eight days. The bees may also be fed with a syrup of sugar or honey to which the same mixture has been added in proportion, a spoonful to every liter of syrup.

Essence of eucalyptus.—Put some in a small box and place it in the hive. This essence evaporates easily, and the vapors will reach everywhere in the hive and destroy the bacilli. A cover of wire cloth should be placed on the box to prevent the bees from drowning in it. Feed the colony also with a syrup to which a little solution of essence has been added. One-tenth of essence to nine-tenths of pure alcohol. A spoonful of the mixture to every liter of syrup.

Naphtol B.—To be used as feed. To every liter of syrup add one-third gram of naphtol dissolved into one gram of alcohol. Keep on as long as necessary. This is one of the best remedies known.

Naphtalin.—This is used chiefly as a preventive. Simply by putting some pieces in the hive and letting it evaporate.

Lysol.—As it does not evaporate readily it has to be used as a syrup. Dissolve it in 20 times its weight of water and spray the combs, bees and inside of the hive with an atomizer. Repeat every few days until a cure is effected. The odor of the lysol is very distasteful to the bees and they sometimes abscond when thus treated.

Creolin.—One of the best remedies known. To be used in three ways. (1): As a spray. At the dose of half a teaspoonful per liter of water. (2): As feed. One teaspoonful per liter of feed. (3): It can also be placed in a box as described above and left to evaporate. Its chief use is as a disinfectant, in the proportion of two teaspoonfuls to a liter of water; to wash the hands of the operator, the tools, frames, hives, etc.

Mr. Tenouillet also described what he calls the De Layens or American method. That is what we call the McEvoy method. As it is well known, I shall not describe it.

COMMENTS.

Substantially, all these remedies are applied in two ways, externally as spray or evaporation, and internally in syrup or honey given as feed.

Concerning the external remedies, I should give the preference to those that evaporate. Spraying is a disagreeable operation for the bees and operator. It is impossible to reach everywhere and every bee. The vapors reach not only everywhere in the hive (except inside of the sealed cells of honey), but also the interior organs and the blood of the bees through their respiratory organs. As to which one to choose, there may not be any great difference. I have used camphor, creolin and crude carbolic acid against bee paralysis with equally good results. That is, no disease as long as the remedy is there, but it reappears more or less about six or eight weeks after it is discontinued. I do not use any remedy in summer, because their vapors give the honey a bad tast, and I don't want to loose my surplus. However, the disease has diminished little by little every year, until it is now insignificant. In using creolin or carbolic acid, only a spoonful should be given, otherwise the bees might abscond.

Concerning the internal remedies the difficulty is to get the bees to take it. Many of the above mentioned remedies have such a bad taste that it is next to an impossibility to get the bee to take it unless it be in such a small proportion as to render them almost useless. I should give preference to the naphtol. It has no taste, or but very little, and is not appreciably poisonous to the bees. As it will not dissolve in water, it is necessary to use pure alcohol first. Never use wood alcohol, as it is highly poisonous and has an abominably bad taste.

The most remarkable feature of the subject, is that the European apiarists succeed in curing foul-brood by the use of drugs, and the Americans don't. But before going into that subject, let us first consider the disease itself.

This, like the majority of diseases, not only of bees, but also of higher animals and the human race, is caused by a kind of minute living beings called bacilli, (bacilli is the plural and bacillus the singular form.)

The special kind of bacillus causing foul-brood in bees is a rod-shaped or stick-shaped being about one six-thousandth of an inch long and a thickness only about one seventh of its length. They multiply in a very singular manner. As long as the blood or juices or tender parts of bees or brood last, they continually grow in length, and when a certain length is attained they divide in the middle and what was one long bacillus is now two short bacilli. These in turn, grow in length and divide like predecessors. But when the food gives out the rod-like being ceases to divide and breaks into a number of smaller, round, grain-like things called spores. These spores are very hardy in some respects. They can resist very high and very low temperature at least for a short time, and also very powerful chemical substances, while the rod-shaped bacilli are comparatively delicate and easily destroyed.

However, the experiments of Dr. Howard have shown that a certain amount of moisture is necessary to the existence of these spores. In dry air and sunshine, they die in a day or two at most. In honey, they live indefinitely, without developing into bacilli. The water contained in the honey furnishes the necessary moisture. The formic acid also present, while not in sufficient quantity to destroy the spores, nevertheless, prevents their development into the bacilli.

This last characteristic explains why infected honey is the chief source of spreading the disease. Spores therein contained will keep their vitality and develop as soon as introduced into the brood or even the adult bees.

It has been observed that adult bees rarely carry the infection. Some writers have doubted their being liable to the disease. But they are wrong. Microscopic examination of adult bees from diseased colonies will show bacilli, but chiefly in their blood. The acid and gastric juices of the adult bee's stomach are very powerful antiseptics. The same fact occurs in higher animals and the human race.

As long as an adult bee lives, the bacilli multiply in her body by division. But when she is about to die she goes out and dies away from the hive. The bacilli being then deprived of food, turn into spores—millions, and perhaps hundreds of millions of them; which escape from her body and float in the air. But as stated above, they can not live long in the dry air and sunshine, the winds carry them away from the hives, the rains and perhaps the dews also, into the ground or to the rivers. Only occasionally some may be carried alive into another colony. This explains why foul brood can be starved out without destroying the adult bees.

On the other hand, the brood dies in the hive. When dead, the spores resulting, spread in the whole hive, on the combs, in the bodies of the bees, in the honey, etc., millions and millions of them. The wonder is that under such conditions, the disease is not even more disastrous than it is.

TREATING THE DISEASE.

Now we may be prepared to see why the European operators may have been more successful in using drugs than we have. The details are not always given in full; but usually the whole apiary was treated alike, so as to prevent any possible spreading of the disease. The use of drugs seems to have been continued some time after the disease had apparently disappeared, in some cases, throughout the whole winter, thus preventing the possibility of the disease breaking afresh from the use of old, infected honey.

Whatever method I would follow, I should certainly use some disinfectant (naphtalin, creolin, etc.) and perhaps some medicated food with all the colonies, the sound ones as well as the others, as a preventive.

In any case, I would destroy at least the diseased brood, or perhaps to be on the safe side, all the brood of the diseased colonies. In treating pickled brood, I remove the diseased brood by raking off cells and brood down to the septum and return the combs. But pickled brood and foul brood are entirely different diseases. I do not think that such combs, in case of foul brood, could be safely returned without being disinfected. I suppose a liberal dose of carbon bisulphide would do the disinfecting.

In discussing the possibility of the transmission of foul brood spores through wax foundation, a correspondent of a German paper, remarks that, even if the heat of the melted wax did not kill the spores outright, they would be imbedded in it, and never be able to get out, having no means to burrow their way through it. A coat of wax will eventually kill any living being anwway, by shutting air and moisture out altogether.

Knoxville, Tenn., April 1, 1902.

The "Let Alone" Plan.

(By Arthur C. Miller.)

THE "let-alone" plan of bee-keeping is one of wholesome neglect, and the term was coined for use in contradistinction to the systems of excessive manipulations. It is a useful phase and the system is more useful still. Many bee-keepers, particularly beginners, feel that unless they are more or less constantly doing something to or for their bees the latter will not thrive, whereas the contrary is the rule. Probably the idea that much handling of the bees is necessary has been caused partly by a misconception that all the things recorded in the text books are always needful, and still more by many articles in the bee press stating that great results may be achieved by certain manipulations.

Surely some operations properly conducted at proper times are productive of good results, but it does not follow that all persons or all places are adapted to such proceedings. When the results are favorable the methods are heralded far and wide, but the failures are seldom heard of. Often, on the other hand, bees left almost entirely to themselves yield far better returns than those most carefully handled. Let the timid or anxious novice and the busy man who can ill spare the time for attention to his pets, take comfort from this and fear not to leave the bees to themselves.

Several years ago I was called away for a six months' trip, the start being made early in spring. I had at that time some dozen or fifteen colonies, and these I looked over and saw that they had abundant stores, after which I put two supers each on most of the colonies, fixed the hives and covers so no ordinary wind could move them, and left. On my return I found a goodly crop of honey, the bees in excellent condition for winter and a report of but four swarms, three of which were hived for me by a neighbor and one left for parts unknown. Perhaps other colonies swarmed, but there was no evidence of it. Some of the most earnest advocates of much manipulation have made the least real progress, while some of the most successful bee-keepers do the least "tinkering."

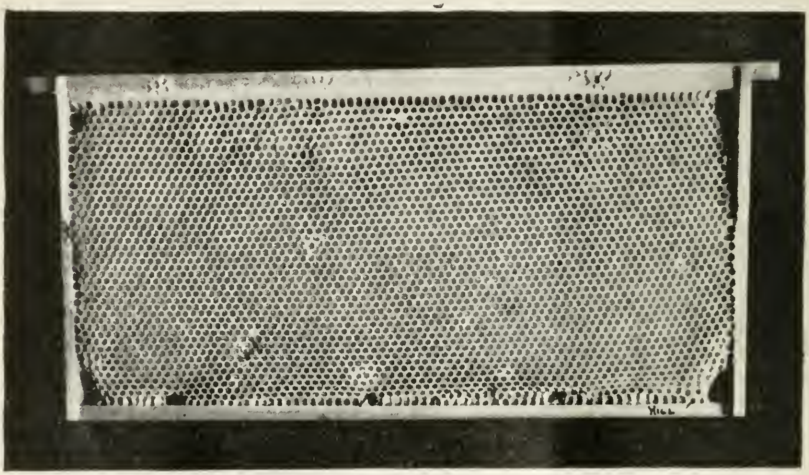
Do not construe the foregoing as an advocacy of ignorance of how and what to do when the need arises, for it is intended solely as a word of caution against constant meddling with the bees, and to call attention to the value of the "let-alone" plan.

Providence, R. I., April 8th, 1902.

The Bee Moth.

(By Bessie L. Putnam.)

WHILE this is generally acknowledged as the worst enemy to the bee, eminent authorities tell us that Italian or even hybrid colonies will seldom be molested, and there is no surer preventive against their inroads than a good strong swarm.



NEW COMB, UNMOLESTED BY MOTHS.

Yet there are many strands of just common bees in the country; and even though so strongly guarded as to be practically immune from their attacks, in view of protecting the combs removed during the summer months, it is well to understand something of the nature, appearance, and habits of the wily pest.

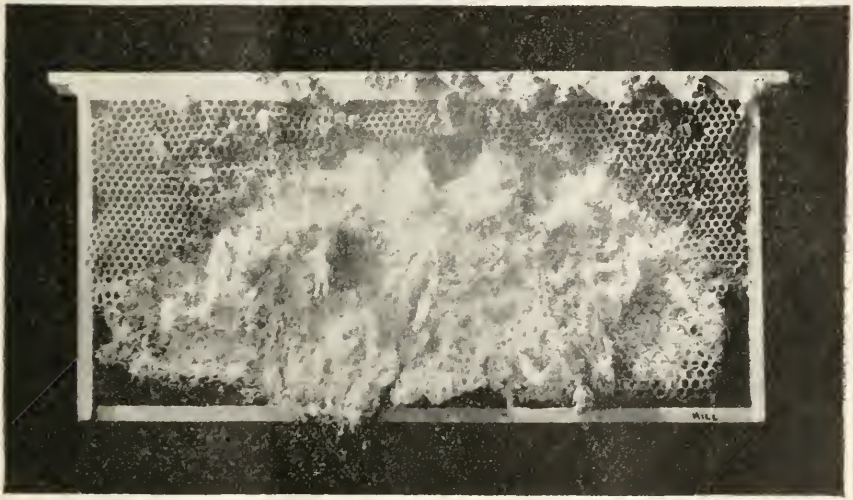
The moth is of a dull gray color, which renders it comparatively inconspicuous among old boards and bits of weather-stained wood. It is exceedingly quick in movement, having been aptly styled by Reaumer, as "nimble-footed," and any but a sharp, trained eye might easily overlook it as it slips among the crevices. Then its work is mainly done after night, when both bees and their owner are resting.

The moth is about three-fourths of an inch long, and measures one and one-fourth inches from tip to tip. The forewings of the male are deeply notched at the end; those of the female slightly notched. The eggs are small, and it is generally stated that two broods are raised in a year. Prof. Cook, however, states that he has found them in every month from May to September, and has proved by personal investigation that the complete cycle of life from egg to imago may be perfected in six weeks or less. Hence he draws the inference that under favorable conditions three broods may be produced annually. The moth may deposit the eggs near the entrance and the newly hatched larva be left to crawl inside, or she may slip in at dusk and perfect her work.

As the larvae hatch they proceed to spin a silken gallery within which they may be securely fortified. This is enlarged as the inmate, gaining in size every day, has increased needs; and when ready to pupate it is about an inch long. It spins once more, this time a cocoon which is placed on the side of the frame, in some crevice of the hive or in the comb. When numerous, these cocoons may appear in clusters on the comb. In two weeks or less in warm weather a full-fledged moth emerges, and life history again repeats itself.

Honey that has been removed from the hive is never safe from them in warm weather, unless packed in a tight box to which they cannot gain access. Many writers claim that for cleaning combs infested the quickest and neatest way is to place them one at a time in the center of a strong hive of Italians. The bees will expeditiously remove all intruders and their debris.

A standard remedy is burning sulphur or brimstone, first placing in an empty hive or box all combs in which the wax worm is found. This will destroy the larvae, but not the eggs. Hence the process must be repeated. Besides, while the smaller worms are easily killed, to destroy the full grown ones requires severe fumigation; and this will very likely discolor the comb, thus greatly injuring the quality of section honey.



BROOD COMB RAVAGED BY LARVAL MOTH.

Carbon bisulphide has been found even more effectual since it destroys eggs as well as larvae, and this without injuring either the honey or the comb. Extreme caution, however, is necessary in its use as it is highly inflammable; under no circumstances should a light be brought into a room containing the fumes. These fumes are also dangerous to man when inhaled in a concentrated form. But by closing the room or box tightly and allowing the chemical to do its work, there is really no danger.

It is a liquid, heavier than air, consequently the dish containing it should be placed above the articles infected. The usual allowance is one pound of the liquid to 1,000 cubic feet of space. As it diffuses rapidly the box with combs should be put in readiness before opening the liquid, which may be poured into a dish and left to accomplish its work. The pure article is colorless and leaves no stain. But much of it contains impurities, which may discolor the articles if poured on them. The fumes, however, will not injure either food or fabric. Hence its value to the apiarist.

It is also a simple means of destroying the homes of another enemy to the bee, the ant. Make a hole in the hill and pour in some of the liquid, quickly covering the aperture with a board to hold the fumes in. Some advocate touching a match to it and causing an explosion, but this is unnecessary, as the fumes will penetrate to all parts of the subterranean passages and accomplish their fatal work.

The presence of the wax worm may be detected by stray webs and a fine dust. Brood combs are preferred to those of section honey, probably because the larvae prefers a seasoning of pollen or dead bees rather than a pure wax diet.

Harmonsburg, Pa., March 22, 1902.

Putting on Sections.

(By G. M. Doolittle.)

"I AM a beginner in bee-keeping, and have subscribed for the American Bee-Keeper. Will you please tell us through the columns of that paper when it is best to put on the sections when working for comb honey?" The above is something which I find in a letter, among a number of other questions, and as it may be a matter of interest to others, as well as this particular individual, I will try and answer to the best of my ability.

From thirty-two years of experience it appears to me that no set time as to month or day can be given for putting the sections on the hives in any locality, as all depends on the strength of the colony and the time of the opening of the blossoms which give our main honey crop, both of which are advanced or retarded in accord with the earliness or the lateness of the season. Some say, put on all surplus arrangements as soon as the first buds giving our surplus honey are about bursting open, no matter about the strength of the colonies. Others tell us to put on sections as soon as the colonies are strong enough, without any reference to the time of the blooming of the flowers, saying, "it is a mistake to put off putting on sections till the honey harvest is upon the bees, as they will sometimes waste time looking through the surplus apartment before going to work." I cannot agree with either of the above, as it savors too much of the old "luck in bee-keeping" we used to hear so much about, and does not give credit to any apiarist of managing his business intelligently.

After years of experimenting to know just when the sections should be placed upon the hives, I have arrived at this: Wait till the hives become populous with bees and the combs well filled with brood, and till the bees are securing enough honey from the fields to begin to lengthen the cells along the tops of the combs next to the top bars of the frames, or build little bits of comb here and there about the hive. When we see this it is time to put on the sections; for if we delay longer we are sure to lose in time and honey; while if we place sections on the hive, no matter how populous with bees it may be, before any honey is coming in from the fields, we shall lose by the bees gnawing or tearing down more or less of the foundation placed in the sections. Where we use only starters of natural comb in our sections, as was the case before the advent of comb foundation, then they could be placed on the hives as soon as the colonies were strong enough in bees and brood, with no trouble as to the bees tearing these starters down; for bees rarely, if ever, tear down comb, unless it is inferior from mold, old pollen, or something of that kind. But even did we so put them on, I can see nothing gained over the other, unless we are liable to be crowded for time, at the right time for putting them on.

Some have put forth the claim that it is only after the honey harvest is over that the bees gnaw holes in and tear down foundation, which may be correct with them in their locality;

but with me, bees quite generally mutilate foundation in sections, more or less, at any time of the year when numbers or hot weather crowd them into the sections, at a time when there is no honey coming from any source sufficient to cause them to think of drawing out any foundation about the hive, which has never been worked upon. I have had hundreds and thousands of sections in which all the upper half of the foundation was gnawed away, but a little strip or neck from one-half inch to an inch wide, and when honey began to come in, and the foundation was being worked upon, the lower part would twist and turn to such an extent that it would be attached to the separators on one or both sides. This would spoil such sections for market, when this attachment was large, or in any event, unless great care was used to separate the attachments from the separators with a very thin knife, before they were separated from the super containing them. But even with the best of care, those having large attachments could not be saved in this way, as the removing from the separator would set the honey to running so that a leaky mess would be the result. Therefore, taking all things into consideration, I think I am right in advising not to put on the sections till honey comes in from the fields, and then rush them on all colonies strong enough to enter them.

Bordino, N. Y., March 29, 1902.

Starting Bees to Work in the Supers.

(By W. W. McNeal.)

THIS is a fine point in bee-keeping, and every one who has the care of bees should study it well. Many promising colonies are spoiled for section work by improper management at the time of putting on the supers. A colt will not pull like the trained horse. When one considers that it is the young bees of the colony that are to be influenced by the super manipulations, the importance of using coaxing tactics will be seen at once. Young bees can be scared away from the supers very easily, and for this reason it should be made as home-like as possible. When the first impulse to go above has been turned aside and storing has begun in the brood chamber instead, supers of sections will almost without exception be ignored by them.

It should be remembered that a colony will not occupy a super when not sufficiently strong to utilize vacant room in the main hive. It is the sheerest folly to put on a super at this stage of affairs, and expect to see the bees enter it at once. Moreover much harm can be done by giving a weak colony added room early in the season. Should the weather become unfavorable shortly afterwards, much of the brood is sure to suffer from cold. The loss is not confined to the immature bees that perish thus; but the natural thrift of the colony fades away after a few such reverses.

Bees cannot work in the super, though strong, when the supply of nectar is limited to the needs of the brood compartment. There must be honey to gather above running expenses of the hive before they will put any in the supers.

Having these two all-important factors—a strong force of bees and a good honey flow—at our command, the next essential is to have the desire of the wax-workers well stimulated. I know of nothing better for this than the giving of a case of partly drawn combs of the current season's make. The fragrant orders of new wax and honey will incite a colony to put forth its best efforts at honey-gathering. But the most practical, because the most accessible, comb early in the season, for the purpose of drawing the young bees into the supers, is old, black, brood comb, with a little brood in it. The blacker it is, the better; just so it is free from mold and dirt. I could never see that such combs seriously affect the color of the honey put into them, if it was originally light.

It is better not to put on a queen-excluding honey-board at the time the combs are given for the communication between hive and super should be as direct as possible. If the queen does go up and occupy them for a few days only, no harm will be done. When the bees are well agoing above, the case of combs may be exchanged for supers of sections and foundation. Or, what I consider better still, if the flow of honey is good, is to lift the case and put the section super between it and the brood chamber. Of course, when this is done you must make sure that the queen is in the lower hive. Usually she will not pass the section super to again reach the upper case of combs. By such manipulation the super, to a very great extent, takes the place of the queen-excluding honey-board, with the advantage of a more direct communication. The queen should not be allowed to stay in the upper or extracting case, as we will call it, for the bees will carry pollen thereto, which will cause more or less fermentation in the honey when extracted.

Another point right here: When there is brood of the proper age in the super shut off from the main hive by means of a super or a queen-excluder, the bees are very apt to construct queen cells. These should be looked after and removed, or the young queen will go down and destroy the old one at a time when her loss may greatly affect the yield of surplus honey.

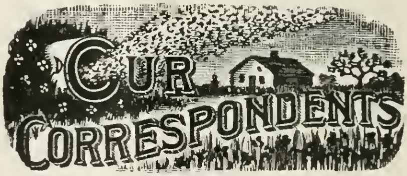
The super should be made absolutely air tight above, for the bees hesitate about placing honey near any opening that admits air, and to some extent, light.

If the colony shows by the common habit of clustering on the front of the hive, that it wants more and cooler air within, give it at the bottom of the hive always. The habit of giving extra supers of sections to cool the hive, at a time when the bees are doing but little work in the one they have, I consider, very impracticable. An auger hole in the middle of the side boards, and also end boards of the brood chamber, in addition to the regular entrance, is a wonderful source of comfort to the bees. These holes will not be used to any extent, as flight holes; but aside from their freer ventilation they afford, its tendency is to keep the bees from storing too largely in the outside combs for reasons above given.

I do not like drone comb for use in extracting stories. If there is little or none in the brood chamber, the queen is apt to pass through the section super to get to it, while a queen-excluding honey-board will prevent her from doing this. The bees will often reserve a goodly portion of the comb for her, at a time when honey is plentiful. This causes dissatisfaction on the part of the bees, and I am inclined to the belief that many excellent queens are "balled" by the workers simply from an inability to get through the honey-board and gratify their wishes. Drone comb has one good feature: it is seldom, if ever, used for the storing of pollen.

Now, it will be seen, I think, that to get the bees into the super at the proper time, it must be so snug and warm, so assuring that the young members of the colony will feel at home while there. In all preparatory work keep close to that which is common to the bees and their obligations will be dutifully performed.

Wheelersburg, Ohio, March 30, 1902.



Titusville, Pa., March 9, 1902.

Messrs. W. T. Falconer Mfg. Co.,
Jamestown, N. Y.

Gentlemen: I should like to ask through the columns of the American Bee-Keeper, in regard to the caging of queens during the honey season. Will Mr. Doolittle, or some one else who has had experience in the matter, kindly let me know when to cage the queens, and how long? I have twenty-three colonies in chaff hives, which are located on my farm, three miles from town, and as I cannot be with them all the time, and run a grocery, am interested in the prevention of swarming. Respectfully yours,

S. Chase.

Murphys, Calif., Feb. 28, 1902.

Editor American Bee-Keeper:

Dear Sir: We have had an unusually dry winter, but February has made amends in giving the state an unusual amount of rain. With me it has rained six inches in four days, and "the end is not yet." Mr. Bennet, of the P. B. J., writes me: "We are having a glorious rain and everything looks promising for a good season, but it will take a large amount of rain to make honey." I am now feeding my bees (outside, or open air feeders). The winter was so open that the bees flew every day and in consequence the bees are weak in stores and numbers. Last year it stormed all through February, keeping the bees from building up, and then, in the first week in March, it suddenly turned hot and the hills bursted into bloom before there were any bees to gather the nectar. I am trying to get ahead of a repetition of that occurrence, but the rains have interfered with my feeding. Should it now clear off, I will be able to get the bees started to raising brood, and when the bloom comes they will be on hand to gather the nectar.

Wishing the Florida bee-keepers a prosperous season, I remain,

Yours respectfully,
Ernest H. Schoeffle.

THE SEASONING SERIES
MANY THINGS BY SEASONINGS SEASONED ARE
DEACON HARDSCRABBLE

Dear Bro. Hill:

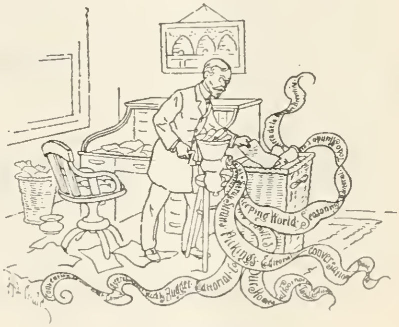
Oh, me! Oh, my! Phwat is that Straw Doctor trying to do? List to this from his stack in March 1st Gleanings: "Bees and poultry have had a somewhat prominent place in Gleanings and now a swine department is to be added."

Did the Doctor intend that for a sugar-coated pill?

"Ye healers of men for a moment decline
"Your feats in the rhubarb and ipecac live,
"While you shut up your turnpike your neighbors can go
"The old roundabout road to the regions below."

Say, what's struck some of the papers? Such jumbles of make up I never saw before. The whole contents of ye editor's desk must have been poured indiscriminately into the hopper, while he steadily turned the crank. But the editor of Gleanings has some excuse, even if the others haven't. Hark! "While I was away I made a business of visiting saloons. . . . Went into all I could find."—(Glea. Mch. 1, p. 180).

"Jack, said my lady, is it grog you'll try,
"Or punch or toddy, if perhaps you're dry?
"And said the sailor, though I can't refuse,
"You know, my lady, 'taint for me to choose;
"I'll take the grog to finish off my lunch,
"And drink the toddy while you mix the punch."



THE EDITORIAL GRIST MILL.

Harry, what are you trying to do? On page 42, you let a chap urge all beginners to begin where their grand daddies did. Just tell him to try the same scheme with all his enterprises and you will hear something drop. Glad you let Bro. Rankin use the next page in shouting Advance! Say, is he married?

Young lady near here wants to know. I've just expressed to you a bottle of arnica, a roll of bandage and a few other conveniences. Little chaps like you, shouldn't get so reckless. Pitchin' into the printer, the inventor, the queen breeders, the long winded fellows and lastly settin' up a bit of a dictionary. Printer will make you so black in the face, folks'll take you for the "devil" (not the one E. R. was looking for though). I've warned you against inventors before, and don't you know that queen breeders not only have all red clover queens, but they also have thoroughbreds; all have raised the average yield, and as colors vary so, 'tis wise to cast an anchor to windward and shout that "purity is not a chief essential."—Gle. p. 181. Say, 'taint fair to give away their secrets that there way. But it do be queer how every time a new idea about queens gets a start the "boys" in the trade shout, "I've got 'em, and got 'em fust, too!" And when they can't keep the pace, then, "the new ideas ain't no good."

"There are three ways in which men take
  Ones money from his purse;
And very hard it is to tell
  Which of the three is worse;
But all of them are bad enough
  To make a body curse."

I reckon it right mean to shut off the long-winded chaps, particularly those who keep saying the same thing over and over each year. Let 'em went, "for they do be amusin' cusses," as Artemus Ward would say.

Really bright is this from the pen of the editor of the A. B. J: "Too much theory is the complaint Editor Hutchinson has from some of his readers. Children don't always know what's good for them, Mr. Hutchinson. Americans are nothing if not practical. A man may be a good engineer without knowing just how a locomotive is built; but he will be a better one if he knows just how the different parts of his machine are put together." Just tell Bro. York to try some more. Verily he is waking.

By the way, what has become of the gentleman from Creek? I don't hear nothin' nowhere about him nowadays, and he used to be obiquitious enough, and had good ideas too, even if some of the rest of us can't make them always work. And whither has the swarthy Moor betaken himself? Has he gone to seek some fair Desdemona, or is he lost in the mazes of some new contraption? Get these two boys at work on some scheme whereby we may be able to get early drones and queens backward in late springs such as this has been. I mean some real good workable plant,—not one of the kind that is evolved by lying awake nights. Let me know how they succeed.

Yours as ever,
John Hardscrabble.

THE Bee-Keeping World

GERMANY.

There are a number of mutual insurance companies in existence in Germany, which will insure bee-keepers against damage. The premiums paid are insignificant, amounting to less than one cent per colony. The Baltische Centralverein was called on to pay but one claim (of 51 marks) in five years. All the other institutions have a surplus on hand.

Dr. Ejvind Astrup found honey bees under the 83rd degree of latitude, according to Deutcher Bienenfreund.

"Box hives versus frame hives" is a subject often discussed among our German friends. The box-hives are probably in the majority in Germany. The reason for this may be the cheapness of the former, and the ease of manipulating them, as they require very little attention. Max Schroter says: "The hive does not produce honey. The principal requirement for successful bee-keeping is skill of the operator. The box hive is for the ignorant, the frame hive for the progressive bee-keeper."

Speaking about spores of foul brood, the Pract. Wegweiser says, they are so infinitely small that one hundred millions of them have room in one bee-egg. He further makes the frame hives responsible for the frequent occurrence of the disease and recommends the sulphur match for all poor and weak or diseased colonies. There may be some truth in the idea of the frame hive scattering the disease, still, in my opinion, the box hive is to be feared a great deal more than the frame hive, for various reasons. I would favor the complete annihilation, or at least, elimination, of the box hive from districts having the disease.

Orf, in Die Biene, fixes the time for development of the inmates of the hive as follows: "The drone requires 24 days; the worker, 21, and the queen, 17 days." According to my own observations, drones develop in 24 1-2 days; workers, in 20-21 days, and Dr. Miller says queens come to maturity in 15 days. I do not think the climate responsible for the differences.

It has been said of late that in Germany more reliance is placed in drugs for curing foul brood, than in America. This may be true, as to the past. But it seems from what I glean from different publications, that destruction by fire is now considered the best and safest way to handle the disease. In the question box the Leipz. Bienenzeitung recommends the following radical treatment: After sunset, close the hive and brimstone the bees. Wait ten minutes, then open up. All combs containing brood cast into the fire; the honey may be used on the table without fear; the empty comb can be rendered into wax. The hives should receive a thorough cleaning, by scrubbing with soda water, and may again be taken into use after an elapse of two or three years. According to Gavenhorst, Ill. Bienenzeitung, destruction seems to be the lawful remedy. Page 48, I find this, in substance: Foul brood has made its appearance in the villages Reinfeld and Ziezeneff. This means a total loss to many bee-keepers, as all bees are more or less affected and have been ordered to be destroyed to prevent the further spreading of the disease.

A desire is again manifested for Cyprian bees in Germany. The Italian race is becoming more and more unpopular.

One of the most extensive bee-keepers is H. Thie, in Wolfenbuttel, claiming to have 14 out-yards of 200 colonies each.

Dr. Dzierzon thinks it is possible to insure the mating of our queens with drones from our own yards by shortening the wings of our young queens.

CHILI.

It is said, that but little honey is used in Chili for culinary purposes; a small amount is made use of in preparing medicines. However, the climate is most favorable for honey production, as the seasons are prolonged, lasting many months. The swarming season is during September, and the main honey flow during December and January. Thus young swarms have ample time to become populous before the real honey harvest. Even the after swarms will be in good shape for business. The seasons favor swarming. An apiary of 160 colonies is reported (Rev. Int.) to have increased to 500, which produced 18,200 kilograms of honey. The bulk of the honey is exported. The writer has often eaten Chilean honey during his boyhood days in Germany.

ASIA.

The traveler, Farisini, says he found many colonies of bees with plenty of stores in an isolated district of Asia (Kalahira). The natives employ a simple method to find bee-trees. During the dry season, they put out water in different places. The bees in search of water find this, and whenever they are seen working on it, are easily followed up or lined to their habitation. Mr. H. L. Chase, of Canandaigua, N. Y., has practiced this same method of bee-hunting, for years, and has been very successful. He says bees never go far from their hive for water, and when he finds bees taking water, he is sure of them.

The natives of Kalahari not only eat the honey, but also the brood; and they understand the preparation of an intoxicating drink from the honey, somewhat as the tribes in Germany did nearly 2,000 years ago.

ITALY.

A bee-keeper near Pravenna, had an apiary of 57 colonies to begin the season with. By natural swarming he had increased on June 15 his 57 to 90 colonies, and taken 3,500 pounds of honey. A second swarming period occurred during July, and when the season came to a close he had 120 colonies, all of which had provided themselves with sufficient stores for winter, and another 2 000 pounds surplus could be taken; making a total of about 5,500 pounds, or very nearly 100 pounds per colony, spring count.

JAPAN.

Japan has a peculiar kind of tree, which produces vegetable wax. The name of the tree is Hajemaki, and resembles our wild apple tree in outward appearance. During October the tree sheds its leaves and its twigs adorn themselves with a berry-like fruit, which is gathered and dried. These berries are afterwards subjected to steaming and pressure; thus a wax is extracted which is used in Germany and other countries in the manufacture of candles and comb foundation.—From Central Blatt.

AFRICA.

Northern Africa also has its bee journal. Its name is Nammla (Bee), Vroqua, traveling in Algiers, discovered a large apiary of 400 hives, kept by an Arab. The hives he used exclusively, were made of cork and seemed to answer the purpose well.—Bienenvater, Vienna.

GUADALOUPE.

The planters on Guadaloupe, one of the lesser Antilles, keep bees principally to increase fruit-setting of their cocoa and coffee trees. It has been ascertained without any question that wherever extensive apiaries are located, the surrounding plantations give much higher yields in fruit than other plantations where no bees are kept. It is not very long ago that the European bee was imported into Guadaloupe, but the climate is very congenial and bees increase fast and do well. There is also a stingless bee found on the island. They live in caves and hollow trees, but are not numerous. They also live in constant warfare with their European sisters. They do not build regular combs, but store their honey in little tubes of dark wax. The honey is also of dark color, but of good flavor. No attempt has been made to domesticate this bee.

SWITZERLAND.

Switzerland has now 242,411 colonies of bees. This is 5 per cent. less than in 1896. It seems in many other countries bees have been on the decrease, America included.

F. Greiner.

SECCIÓN ESPAÑOLA.

"The American Bee-Keeper" se envia á principio de cada mes. Si por algun motivo el suscritor no recibe su periodico á su debido tiempo, sirvase notificarnos y les enviaremos otro ejemplar.

Todo asunto relacionado con la Dirección y subscripción á este periodico, debe enviarse á "The American Bee-Keeper, Fort Pierce, Florida. El dinero puede remitirse por giro postal. El giro puede hacerse á The W. T. Falconer Manufacturing Co., en Jamestown, N. Y., cuando convenga más á los marchantes de esa casa.

Cuando el suscritor reciba el periodico con una faja azul es para avisarle que su subscripción termina con ese ejemplar. Esperamos ser favorecidos con orden para continuar la subscripción. Rogamos á nuestros corresponsales escriban los nombres y direcciones bien claro para evitar demoras.

Una faja roja indica que se debe la subscripción y esperamos su pronta atención al particular.

Subscripcion: 50 centavos al año.

PROGRESOS DE LA APICULTURA.

Por El Señor Arturo Villamil.

Antiguamente se creyó que la apicultura sería una industria inactiva y rezagada, que marcharía siempre á la cola de las demás, por la condición original de tener como agente productor un insecto, que al ser irracional como todos los de más animales, se mostraría rebelde á las modificaciones que le fuesen necesarias introducir al hombre en sus costumbres para explotarlo mejor.

Pero esta creencia, concebible solamente en los cerebros de nuestros abuelos que asesinaban la industria y la activa raza de insectos himenopteros con sus procedimientos primitivos, ha desaparecido completamente en nuestros tiempos, en que se ha llegado por el estudio constante de hombres tan sabios como Huber, Langstroth, Reaumur. Layens y tantos otros, á la modificación completa de métodos y aparatos; pues ellos, dándonos la clave de todos los adelantos que les han sucedido, abrieron á la agradable y lucrativa industria apícola las puertas del progreso, camino por el que avanza á pasos agigantados.

El hombre, ser superior, que ha llegado á dominar á todos los demás animales, sometió también á su dependencia las abejas, estudió sus hábitos y costumbres, las domesticó y por último las adapto á la explotación alojando sus enjambres en colmenas que fuesen de fácil manejo y mayor producción.

Enumerar todos los progresos obtenidos en esta industria, sería tarea muy larga de desarrollar en las columnas de un periódico, por lo que me concretaré tan sólo á reseñar los más importantes y que han transformado completamente este arte.

El primer paso dado por esta industria hacia el progreso, consiste en haber sustituido la apicultura fijista con sus sistemas de colmenas vulgares de panales fijos, por la apicultura movilista que adopta cajas horizontales ó verticales de panales movibles.

Este gran adelanto reporta á los apicultores incontables beneficios, fáciles de comprender, al mismo tiempo que le evita todas las molestias de la apicultura fijista, tan primitiva y poco beneficiosa como destructora del precioso insecto, pues para castrar esta clase de colmenas en la época de la gran recolección, los apicultores que aùn las adopten se ven precísados á destruir poyo y panales para obtener la miel.

Hoy día, debido á los modernos sistemas de cajas con bastidores movibles, el apicultor coopera á la buena marcha de sus colonias, pues examinando diagnostica el estado de ellas pudiendo auxiliarlas segùn sus necesidades, suministrado un panal de miel á la que esté falta de alimento, unbastidor con poyo al nacer á la que tenga su poblacíón muy diezmada, y también un bastidor con gérmenes menores de tres dias para que se proporcionen reina ó madre á las que se encuentren huérfanas y así, en esta forma, el apiarista estable se entre todas sus colonias un cambio que bien se puede llamar de auxilio y que coadyuva á sostenerlas potentes en lo cual estriba el éxito de esta industria.

Las operaciones de aumento, imposibles de realizarse en la apicultura fijista por otros medios que no sean los de la enjambrazón natural, en la cual no debe confiar ningún apicultor para aumentar el nùmero de sus colmenas, se han hecha fáciles y sencillas con la apicultura novilista, pues esta admite el aumento por medio de la extracción de los bastidorecon los que se forman enjambres arficiales que es el sistema generalmente usado dentro de la apicultura moderna para aumentar, pues con él se duplica en la época de las divisiones el nùmero de cajas de que conste el apiario. Como est, se han simplificado considerable mente y se hen hecho mas prácticas todas las operaciones apícolas por medio de esa sencilla movilización de los bastidores que ha sometido las abejas á la inteligencia del hombre no estando ya entregadas á su propio instinto, debido álo cual se ha logrado aumentar satisfactoriamente la producción de la ingeniosa industria apícola.

Más, no solo ha progresado la industria apícola en sus modernos sistemas de cajas, que es bastante, sino también en un sinnùmero de aparatos que han llevado á la perfección es te ramo tan lucrativo Tenemos los extractores de cera al sol y al fuego, aparatos sencillos por medio de los cuales se elabora con perfección este rico producto, el cilindro ó grabador de celdas, laminando las planchas de cera inicia y adelanta de manera asombrosa las construcciones geométricas de las abejas, el extractor de miel, merced al cual y por medio de la fuerza centrífuga se extrae este producto sin destruir la cría ni la obra de los bastidores, y en fin, ha sido tanto el adelanto de la apicultura en estos ultimos tiempos que para todas sus operaciones se han ideado ingeniosos aparatos que han llevada esta industria hacia la mas alta perfección.

La enjambrazión, esa fiebre ó delirio que se apodera de las abejas por los meses de Marzo y Octubre y que las impulsa á abandonar sus moradas constituyendo esto un peligro para los apicultores que desconocen los procedimientos modernos para contenerla, se ha logrado evitar gracias á la inventiva de los apicultores americanos, que han demostrado después de varios experimentos practicados con éxito completo, que cortándoles á las reinas, después de ser fecundadas, el extremo de una de las alas superiores, se evita el enjambre de las colonias, pues se pone á esta en la imposibilidad de volar, con lo cual se conjura felizmente el peligro.

Pero uno de los más curiosos progresos alcanzados por los apiaristas americanos, es el haber podido prolongar en unas diez centesimas de pulgada la extensión de la trompa ó len güeta de las reinas con lo cual las abejas descendientes de estas pueden al salir á la pecora, libar en los receptáculos de las flores en que otras, no sujetas á esta modificación le es completamente imposible por la poca extensión de su trompa.

Los estudios que con grande éxito se vienen haciendo en Francia y otras naciones de Europa para convertir el hidromiel en una bebida de tan buenas ó superiores cualidades como el vino, y el consumo que de él se comienza á hacer y que aumentará considerablemente cuando su elaboración sea perfecta, le reserva en lo porvenir á la industria apicola toda la importancia á que es acreedora por la riqueza de sus productos.

Por ùltimo, la prepaganda apícola que aumenta cada día más por medio de folletos y revistas, está haciendo que se generalice esta industria de gran porvenir. Hoy muchos que la tomaron como un sport están dicados á ella profesionalmente, convencidos de lo muy benéfico de sus resultados.

En Cuba, donde las condiciones climatológicas unidas á la riqueza y exuberancia de su flora hacen de esta isla un país esencialmente melífero, por su constante primavera, la apicultura tiende á desarrollarse en alto grado, lo cual hará de la Isla á no dudarlo, uno de los países mas productores del precioso nectar sacarino.—Cienfuegos, 13 de Febrero de 1902.

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A red wrapper on your paper indicates that you owe for your subscription. Please give the matter your early attention.

Editorial

Send for sample copies for your bee-keeping friends.

The next annual convention of the National Association will be held in Denver, Colorado, in September.

Mr. L. L. Andrews, Corona, Riverside County, California, writes that the season in his vicinity is fully a month later than last year.

Should the reader receive at any time an extra copy of The Bee-Keeper, kindly hand it to some bee-keeping friend who is not a subscriber, and confer a favor upon us.

The budding young apiarist shown on page 62 last month, is a son of Mr. Arthur C. Miller, of The Bee-Keeper's regular staff of contributors. By an oversight, this fact was not stated.

Subscriptions for several months past have been coming at a rate to beat all previous records. New subscription books and more help have to be added this month. We greatly appreciate this increasing patronage.

Most of the exchanges which regularly publish a list of the officers of the National Bee-Keepers' Association, appear to have overlooked the fact that a new president was elected last year at Buffalo. Is it not due to our president that these lists be revised?

An early spring is reported by Mr. A. C. Miller, Providence, R. I. Mr. Miller states that his bees gathered their first pollen of the new crop, March 24; while the season's first honey was gathered from maple, March 31st. Prospects there are favorable for the season.

We regret to learn that the Hon. Eugene Secor, Forest City, Ia., has found it necessary to resign his position as general manager of the National Association. It is improbable that the Association's future history shall disclose more earnest or efficient ability in its general manager than has been shown by Mr. Secor. The board of directors, it appears, have appointed Mr. E. T. Abbott, St. Joseph, Mo., to fill the unexpired term.

Dr. Miller, in Gleanings, insinuates strongly that super is not correctly pronounced either "sooper" or "supper." He fails, however, to favor the fraternity with the proper pronunciation, a thing which he is doubtless well qualified to do. Since the Doctor has recently been finding fault with those who seem to delight in pointing out the errors of others, without imparting correct information in regard to the subject criticised, we shall hopefully anticipate the pleasure of being correctly informed in this matter.

As an example of the preference of the wax-moth for combs in which brood has been reared and pollen stored, the two engravings shown in this number will serve. Both were taken from a neglected hive which had been depopulated by ants, in an out-apiary, and were therefore exposed alike to the ravages of the moth. One was a newly-drawn sheet of foundation and remains unmolested; while the one containing pollen and some brood was totally destroyed. The illustrations are photographic reproductions.

"The National Bee-Keeper" is the name of a new journal of twenty-four pages, which has reached our exchange table. "The National" was born in March, is edited by C. B. Bankston, and hails from Dinero, Texas. It has a decidedly free and easy style about it, which makes it interesting. This completes a record of two births and one death in Texas' bee-paper business since the beginning of the year, with eight months yet to hear from. The American Bee-Keeper wishes Brother Bankston and his journal a full measure of success.

In a letter bearing date of April 7, from Dr. C. C. Miller, of Marengo, Ill., he stated that the temperature in his locality on that date was 22, and snow was falling. What a striking contrast, in so short a distance, with the conditions prevailing in South Florida upon the same date: Swarms in the air; drones in abundance; young queens setting up house-keeping in their new homes; new, white combs from which the warm honey drips when shaken; flowers, birds and sunshine, with new vegetables and fruit thrown in. Ours is truly a great country.

DENVER.

The Next Annual Convention of the National Bee-Keepers' Association to be Held in That City.

The following is received from President Hutchinson:

Denver has been selected as the place for holding the next meeting of the National Bee-Keepers' Association—time, the first week in September. The exact date has not been decided upon, but the first session will probably be held Tuesday evening or Wednesday morning. The West has several times asked for the convention, and has been put off with promises—that we must follow the G. A. R., or something of this sort, in order to secure the needed reduction of railroad rates. This year the G. A. R. meets at Washington, away to one side of the country We met there several years ago, and only about twenty members were present—the most of those from near by. The West has been going ahead with great leaps and bounds and can rightfully claim recognition. The Colorado State convention last fall was equal to many meetings of the National Association. And in all probability, the Colorado State Bee-Keepers' Association will meet with us in joint convention. If held at Denver, the bee-keepers of Utah, California, Texas, and all the great West will be able to "get there." I firmly believe that a convention can be held at Denver that will be the equal of any ever held.

Of course, the first question asked will be: "What about rates?" Well, they are all satisfactory, or, of course, we could not have gone to Denver, as a convention without low rates on the railroads was never a success. The National Letter Carriers' Association holds its annual convention in Denver during the first week in September, and an open rate to everybody will be made at that time. A representative railroad man told Mr. Working, the Secretary of the Colorado State Bee-Keepers' Association, that the regular fare outside of Colorado would be one fare, plus $2.00 for the round trip, with a regular rate of one fare for a round trip in Colorado, while there have been made some specially low rates from some points in the East. From Chicago the fare will be only $25 for the round trip. From St. Louis it is $21. From St. Joseph, Kansas City and Omaha, it will be only $15. Rates from points still farther East have not yet been definitely settled.

Bee-Keepers in the West will need no urging to come; to the bee-keepers of the East, I will say, take the trip. It will open your eyes, not only in regard to bee-keeping, but to the wonderful possibilities of the great West. Your tickets will give you all the time you wish to see Colorado's beautiful mountain scenery—"The Switzerland of America." Don't miss this opportunity of seeing its wonders, and mingling with its bee-keepers—the men and women with great big hearts.

W. Z. Hutchinson, President.

NEW YORK'S NEW LAW.

That New York still continues to set the pace, in the matter of protecting apicultural interests, is clearly shown by the following, from President W. F. Marks, of the New York State Association of Bee-Keepers' Societies. The Empire State may not have a prominent apiarist in her legislature, as have Michigan and Iowa, but in the Honorable Jean L. Burnett, member of assembly from Ontario county, its bee-keepers have a friend as staunch and able as could be wished. Our bee-keepers yet remember with gratitude the foul brood law which came into effect April 4th, 1899, through the persistent efforts of Hon. Jean L. Burnett:

Chapinville, N. Y., Mar. 24, 1902.
Editor American Bee-Keeper:

Dear Sir: I hand you copy of a law, or that portion of the law relative to honey, which has just passed the legislature and been approved by the governor. It explains itself. The duties of the commissioner of agriculture and penalties for violation of the agricultural law are provided for in other sections of said law, abstracts from which are annexed.

The Hon. Jean L. Burnett, of Canandaigua, who secured the passage of our foul brood law, also introduced and secured the passage of this law. Valuable aid was rendered by many prominent members of the legislature; the Department of Agriculture; the Director of the Experiment Station and many other advocates of pure food, to all of whom due credit should be given.

Yours truly,
W. F. Marks.

THE ANTI-BOGUS HONEY LAW.

An Act: To amend the agricultural law, relative to prevention of disease among bees and to add sections thereto relative to honey, to be known as sections eighty-a and eighty-b.

Section 2. Said chapter three hundred and thirty-eight is hereby amended by inserting therein, after section eighty thereof, two new sections, to be known as sections eighty-a and eighty-b, and to read respectively as follows:

Section 80-a. Defining honey. The terms "honey," "liquid or extracted honey," "strained honey," or "pure honey," as used in this act shall mean the nectar of flowers that has been transformed by, and is the natural product of the honey bee taken from the honeycomb and marketed in a liquid, candied or granulated condition.

Section 80-b. Relative to selling a commodity in imitation or semblance of honey. No person or persons shall sell, keep for sale, expose or offer for sale, any article or product in imitation or semblance of honey branded as "honey," "liquid or extracted honey," "strained honey," or "pure honey," which is not pure honey. No person or persons, firm, association, company or corporation, shall manufacture, sell, expose or offer for sale any compound or mixture branded or labeled as and for honey which shall be made up of honey mixed with any other substance or ingredient. There may be printed on the package containing such compound or mixture a statement giving the ingredients of which it is made; if honey is one such ingredient it shall be so stated in the same size type as are the other ingredients, but it shall not be sold, exposed for sale, or offered for sale as honey; nor shall such compound or mixture be branded or labeled with the word "honey" in any form other than as herein provided; nor shall any product in semblance of honey, whether a mixture or not, be sold, exposed or offered for sale as honey, or branded or labeled with the word "honey," unless such article is pure honey.

Abstract from the Agricultural Law relative to penalties.

Section 37. Every person violating any of the provisions of the agricultural law shall forfeit to the people of the state of New York the sum of not less than fifty dollars nor more than one hundred dollars for the first violation and not less than one hundred dollars nor more than two hundred dollars for the second and each subsequent violation. When such violation consists of the manufacture or production of any prohibited article, each day during which or any part of which such manufacture or production is carried on or continued, shall be deemed a separate violation of the provisions of this article. When the violation consists of the sale, or the offering or exposing for sale or exchange of any prohibited article or substance, the sale of each one of several packages shall constitute a separate violation, and each day on which any such article or substance is offered or exposed for sale or exchange shall constitute a separate violation of this article. When the use of any such article or substance is prohibited, each day during which or any part of which said article or substance is so used or furnished for use, shall constitute separate violation, and the furnishing of the same for use to each person to whom the same may be furnished shall constitute a separate violation.

Section 2. This act shall take effect immediately.

BEESWAX ADVANCED.

Owing to the recent advance in the price of wax, The W. T. Falconer Mfg. Co. desire to announce that the price of foundation will be three (3) cents higher than last quotations. Those ordering foundation will please note this rise; and those having wax for sale should note the fact that The Falconer Company for the present offer 32 cents in cash, or 34 cents in goods for nice, pure wax delivered at Falconer, N. Y.

HONEY AND BEESWAX MARKET.

Boston, Mass., March 8.—We beg to report a fairly good spring demand for comb honey, and from present indications stocks will clean up in good shape. Prices range as follows: Fancy, 16c; No. 1, 13 to 14c; No. 2, none. Extracted is in good supply and moves slowly; California, 7 1-2c.

Blake, Scott & Lee.

Chicago, Ill., April 7.—Choice white comb honey produced from basswood and white clover is scarce, and brings 15 cents per lb., all other kinds of white is in over supply, and the market is weak at 12 to 13 cents light amber grades 10 to 11 cents; dark 8 to 9 cents; candied and mixed lots 7 to 8 cents. Extracted weak with white ranging from 5½ to 6½ cents; amber and dark 5 to 5½ cents. Beeswax selling at 32 cents and in good demand.

R. A. Burnett & Co.

Buffalo, N. Y., April 7.—Strictly fancy honey selling better 14 and 15. Other grades also moving better at 9 to 12 cents. We advise cleaning up all the honey now as when the weather gets warmer the demand will stop. Beeswax wanted, 25 to 33, as to quality. Batterson & Co.
159 Michigan street.

Kansas City, Mo., April 7.—Comb honey is in large supply and selling as low as $2.25 to 2.50 for 24—section cases. The demand is good. Extracted sells at from 5½ to 7c. Price of beeswax, 30c., with none on the market.

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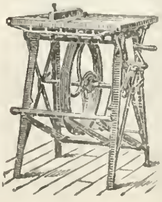

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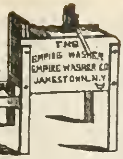

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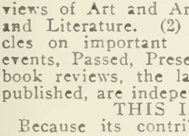

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THE AMERICAN BEE-KEEPER

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HAWAII.

A BEE-KEEPER SUBSCRIBER WRITES ENTERTAININGLY OF THE APICULTURAL SITUATION IN THE SANDWICH ISLANDS.

(By H. H. Smyth.)

ON the island of Oahu, the greater part of the honey is produced. There are two large corporations there; one is incorporated for $65,000 paid up capital, with a bee privilege of 75,000 acres. They make a large amount of honey and ship mostly to London. The other is not quite so large, but they make and handle a lot. There are quite a number of persons, both white and Japanese, also in the business. The bees are imported Italians and of course, hybrids, as well. The wild bee (of which there are a large quantity on the islands) are the black or German brown bee.

Our honey source, that is, the best quality (light amber) comes from the kauvi or algeroba, which blooms more or less nine months in the year and the honey is fine flavored. There are also a great many weeds and much lantana, which gives a dark honey at certain seasons.

On Hawaii, 150 miles, a little south of east, from Oahu, the principal honey district is, Kona, situated on the southeastern or lee side of the island, sheltered from the strong northeast trades, but having a cool land breeze at night, while during the daytime the breeze comes from the sea.

Close to the beach is the algeroba or kawi, and up at an altitude of, say, 800 to 900 feet, they have some sumac, weeds and lantana, miles of it—so thick you cannot pass through it, and cactus.

The honey flow up ("mauka," as we say) or at that elevation is very uncertain and the honey is dark. In fact, I might say, the only real source of honey is kawi, there is some from coffee blossom, but the flow is so short that it is hardly worth mentioning.

I think there are only two white men on the island who are in the business for money, Mr. Gordon Glore, at Napoopoo and myself.

I keep my bees on L frames and in 8-frame hives. The frames (Hoffman) we import from the states and the hives we make by hand of 7-8 redwood. Mr. Glore makes his own frames and hives. He adopts the Heddon plan. There are a lot of Japs in the business and they make 10-frame hives out of anything that comes along, from a coal-oil box ot a 2-inch plank, and also use Hoffman frames.

The Japs thought all they had to do was to get a hive of bees, put a super on, and when the super was full cut the honey out and squeeze out by hand, then sit down and eat and smoke till the super was full again: but the most of them found to their sorrow that that was a loosing game; and now there are only a few who have stayed with it and got extractors, etc. I know of two who run 200 colonies and understand the business quite well; although one cannot impress upon them the necessity of getting good queens, any queen is good enough for them.

Last year I imported three queens

from the states and raised quite a number from them. This year I imported 12 more and all came through alive. I expect this year to get enough from them to do away with my black bees.

I have been in the business three years. I started with three colonies and did not intend to make it a business, but I got an "A. B. C." subscribed for Gleanings, The American Bee-Keeper, and from the three have learned what little I know, as I was entirely ignorant of bee-keeping. Last year I took over two tons from 36 hives; now I have 88 and swarming is not over yet. I expect to increase to 100 this year. The trouble here is our inability to get supplies. There is no agent here for Falconer or Root, and only one man in Honolulu who imports and he just keeps frames and extractors and charges enormous prices. I think if one of the large firms would have an agency here it would pay well as the Japs are progressive, and if they see it is money in pocket they will buy.

Another drawback is, we are so far from market that the freights eat up all the profits. My honey is worth 5 to 5 1-2 in the states and we have to sell here for 3 1-2 to 4 cents, so you see we are not getting rich, but when the new steamship lines get into operation freights will come down.

I have no camera but as soon as I can get a picture of my apairy I will send you one. Now, Mr. Editor, if you think this preamble is worth putting in print you are welcome to it.

I might say in conclusion that my apiary is about 100 yards from the sea and my extracting house and workshop is an old stone house, 70 years old, the first house built by the missionaries in the islands.

Kailua, N. Kona, Hawaii, April 30, 1902.

Box Hives--Hive Covers—Clipping Queens, Etc.

(By T. K. Massie.)

ON the subject of box-hives, page 43, I want to endorse and emphasize all that W. W. McNeal says. As long as all goes right with the bees —as long as they are in a normal condition—a box-hive is an "ideal palace." So far as the welfare of the bees is concerned a box-hive is far superior to most all the frame hives in use. Mr. Adrain Getaz, page 46, in speaking of the "Ideal home of the bee" practically endorses the same ideas. Bees in a hollow tree, surrounded by rotten wood, shade, etc., are much better protected than when placed in most of our "thin walled" hives.

In constructing a hive we should strive to carry out the principles in box-hives, thus working for the best welfare of the bees. It is only when something goes wrong with the bees—when a colony is, from some cause thrown out of its normal condition—that the box-hive is a failure, so far as the bees are concerned. But so far as the convenience and interests of the operator are concerned the box-hive is always a failure. Then our frame-hives should also embody all the modern improvements and conveniences for ease of manipulation. Chaff hives are too costly and cumbersome to handle.

I cannot endorse what Mr. Getaz says in regard to "feeding on top of hives." The proper place to do feeding is on top of hive in every case. With a thin super cover board 1-4 to 3-8 inch thick with a few 7-8 inch holes bored in it. Hill's pepper box feeders and a telescope cover, we can feed on top of hives in all cases. With this arrangement all the escaping heat goes into the feed. We never have to open a hive and no robber bees can ever get a taste. When feeding is done we close up the holes in super cover with corks.

Of all the nuisances we have to deal with the ordinary flat covers are the greatest. After painting and working all last summer on a lot of 40 of these flat covers, trying to close up all the leaks, I now find several of them leaking. Two weeks ago I overhauled my bees and in four colonies covered with these flat covers I found everything wet. The frames were so badly swollen that I had to drive the followers out with a hammer. This operation broke down several nice combs. Such experiences as this would provoke one to profanity if he was in the habit of using profane language.

On the night of the 31st of March we had quite a storm of wind and snow and the next morning I found nearly half of the flat covers blown off and the frames covered with snow; most of the cloths also having blown off. I shall make kindling wood of all of these nuisances this season. They are subject to all the objections that C. A. Hatch mentions in the Bee-Keepers' Review. and more too. A telescope cover, covered with tin or other metal and painted white, (painted tin seems to be cooler in hot weather than wood) fills every requirement that a flat cover can, and quite a number that a flat cover can't fill. It keeps the bees always dry, helps to retain the heat, never blows off, protects the bees from robbers in feeding, etc. If made right they are nearly as cheap as the flat covers and are the only sensible cover to use.

"Does clipping queens' wings cause the bees to supersede their queens," is a question frequently asked, and which I answer both yes and no. If done in a bungling manner, yes; but if done right, no. Last fall I ordered a queen from a prominent advertiser and directed him to clip the left wing when caging her. The queen arrived with both wings on each side clipped off close to her body—one of the worst mangled queens I ever saw. Anyone doing such bungling work as this ought to be exposed by name. I now find the bees preparing to supersede her. A few days ago I was talking with two of my friends who keep bees and they both condemned the practice of clipping queens' wings because "the bees always supersede such queens." Upon inquiry I found they clipped all the parts of the wings on both sides close. When only about one-half of the large wing on one side is clipped (the right way to clip) there will be but few cases of superseding on account of clipping the wings.

Tophet, W. Va., April 1902.

Deacon Hardscrabble III.

Instead of the usual letter for his department this month, the deacon writes somewhat apologetically, stating that he had been unusually busy with the bees, and hoeing his large patch of sweet potatoes; and as a result of the violent exercise and extreme hot weather, he suffered a slight physical collapse. His somewhat incoherent style—which may be observed in the appended criticisms, which were penned in a nervous hand—together with the fact that he wished the editor a very "Merry Christmas," gives some ground for our fears that the deacon may have suffered a sunstroke. We hope next month to present his kindly face, as usual:

"You beekeepers are a quarrelsome lot, you are always fighting among yourselves" quoth a bugologist of national reputation to me recently. And the worst of it is, he's right. Wonder if it is due to the constant prodding we get from the bees? Be that as it may, we're a peppery crowd. For a year agone we have been lamming each other's heads over breeding matters; who's to blame? Why that bland little Rhode Islander. Didn't ye mind with what seeming innocence he tossed the subject at us? And now I reckon he is laughing in his sleeve.

What's to be the next bone of contention?

Besides pepperiness we are obtuse, deucedly so. Brother Secor said, "I can't, shan't and won't serve as General Manager another year," but we elected him nevertheless, and he politely threw his books at our head and I presume wished us in some hotter place than the United States. Leastwise if he didn't he'd oughter. What of it? Well, a lot of it, and it's rapidly getting no better. Who's to blame? Oh, congress I reckon.

What a jolly lot of rot is printed about manipulations. To some the only successful path seems to lie through a labryinth of methods and details. Such and such things to get bees ready for the harvest, another such and such to get 'em over it, another lot to put in queens. Why if you will just kick the stuffin' out o' them or into them as the case may be, they'll do your bidding like little devils set at mischief. Where do you opine Brother Coggshall would come out if he worked the "pottering systems" in his yards? Oh, give us more such "horse sense." Now that chap up in Cuba, N. Y., needn't take that as a sugar plum. But he's all right though and is doing good work along lines most of us are worse than ignorant of. Worse than ignorant of, because what some know ain't so. All so afflicted had better shut up and go way back and sit down.

Wish you'd leave some of those

queer names out of your "Beekeeping World" or else translate them. Some of we uns can't speak 'em nohow. I was near about used up by a lot of those pesky Syrians and the May number of your paper pretty nearly finished me. Latterly I've thought a right smart about starting a paper of my own but opine competition (such as it is) is strenuous enough for you now.

What a spread the "Review" is making. The November number opens with a photo of a great yield of honey from black bees. Now for a lot of ads of "Choice Black Queens from select mothers, etc, etc." First thing Brother Hutchinson knows he'll be charged with starting a black bee fad. In the same magazine your lively Tennesseean and that enthusiast of Cuba, N. Y., are having a merry-go-round about heredity, etc., Honors at present on the side of he of Cuba. Fun for the onlookers and I surmise 'twill be valuable to them bye and bye. 'Pears to me that some of the writers on heredity are unaware that the subject has progressed since Darwin's time. Don't interfere. Only just watch how quietly they will steal away when Mr. S. begins to let out the latest knowledge on the subject. As I have once before quoted: "What's the use of knowing things when so much we know ain't so?"

Gleanings for December 1 has an editorial stating that they are going to discuss cellar wintering again. Oh dear! Say, why don't you suggest that before they do that they collect facts on which to base the discussions? That they put self registering thermometers and hygrometers into about 25 different cellars. That they collect memoranda of every observable detail of every colony in those cellars and up to the time they are dead or ready for supers? Then begin the discussion. Glad we don't have to fuss with any such fixins.

Hope the New Year will bring you what you want. Can't give you any better wishes than that.

Yours as ever,
John Hardscrabble.

The world's largest and most successful apiarists are subscribers to The American Bee-Keeper. Perhaps more would be large and successful if they were subscribers.

Fastening Foundation in Sections.

(By G. F. Herman.)

THERE are not a few bee-keepers who are seeking diligently for a good and satisfactory method to do this work. It is both perplexing and unprofitable to have a number of starters tumble down in the midst of a honey flow. It is very essential to have the work done thoroughly so that when the bees cluster on the foundation and begin comb building it will sustain their weight. I will try to describe a method which has given me very good results, it is so simple that anyone trying it, even the first time, will succeed fairly well.

On account of doing business in New York city this winter, I had gotten very much behind with my preparatory bee work, so my wife volunteered to fold the sections and put in the starters, although she has had no experience whatever in this line she soon became familiar with the work and did it as good as I myself could have done it.

In order to get the bees to build their combs nice and straight in the sections, the starters must be put in the middle of the sections. For this purpose we use a board with four blocks nailed on to it, 7-8 of an inch thick by 3 and 7-8 inches square. This size is for the standard section which holds about one pound of honey. We then pick up four sections at one time and place them over the four blocks. The sections being on their edge, lay in the one-inch starters, or full sheets, just as preferred. The blocks bring the starters just midway in the sections. We next dip our piece of tin into the heated wax and touch the starter and sections at the uniting point, holding the starter in place with the left hand, withdrawing the piece of tin instantly, as it only requires a touch and the work is done. If full sheets are used we dip twice, touching the top and one side, and leaving one side and the bottom loose for expansion.

The size of the piece of tin used in the operation is three and six-eighths by five inches with a perfectly straight edge. The receptacle to hold the heated wax is a small sardine box two and three-quarters by four inches, kept about one-third filled with wax and placed over a small hand lamp with a tin chimney, having the tops nipped in a little and then bent out to form a crown which will give vent to the burning lamp when the pan of wax is placed on top. All these utensils are inexpensive and can be picked up around any home. A little experience will soon indicate the right temperature to keep the wax for expeditious work.

Englewood, N. J. Feb. 17, 1902.

QUEEN EXCLUDERS.

A FEW GOOD SUGGESTIONS WITH REFERENCE TO THEIR USE

(By Dr. C. C. Miller.)

M~~R. EDITOR:—~~On page 61 M. F. Reeve seems quite positive that without queen excluders queens will be sure to go up into the supers and lay there. I may say to Mr. Reeve that I have produced comb honey for a good many years, and I have never used excluders to keep the queens from going up and I would not be troubled using excluders for that purpose if they were furnished for nothing. I do not mean that I have never had a queen lay in a super, but that the cases are so rare that it would not pay to use excluders to keep queens down.

For years there has been this conflict of opinion, one man saying that excluders were unnecessary another being equally positive as to their being indispensable. While my experience is the reverse of that of Mr. Reeve. I am quite ready to believe that he is entirely correct, and that without excluders queens will be sure to go up into his supers.

For a long time it puzzled me to understand how there could be the difference, but I think I have solved the mystery. Nowadays there is little or no drone comb left in the brood chamber, and the bees make desperate efforts to secure drone brood. More than once, when using ten-frame hives, I have known the queen to go outside the brood-nest and lay eggs in a patch of drone-comb, leaving one or two combs without any brood between this patch of drone-brood and the worker-brood of the brood-nest. You will notice that Mr. Reeve especially mentions that in his supers he found "the nicest lot of capped drone cells." I am not certain whether this was in working for comb or extracted honey, and it doesn't matter; he says at the outset that excluders are necessary for either. If I am not greatly mistaken the queen goes up into the super to lay because the workers have there prepared drone cells for her.

If they go up into his supers to rear drone brood, why don't they do the same thing for me? Simply because there are no drone cells in mine to bait the queen up. I use top and bottom starters of worker foundation, filling the sections entirely full. If I should use small starters I would consider excluders indispensable.

I would not think of working for extracted honey without excluders, for even if only worker comb should be in the supers there would be at least part of the time empty comb there, and whenever the queen should be a little crowded for room she might find her way up. When working for comb honey, I should want excluders, unless there was so much drone comb in the brood chamber that there would be no desire to have any elsewhere, or unless the sections were so filled with worker foundation that there was no chance for drone comb above.

Marengo, Ill., April 7, 1902.

A SINGLE ORGANISM.

Being So Regarded, a Colony of Bees Should Not Be Carelessly Divided—A Field for the Exercise of Thought.

(Arthur C. Miller.)

RECENTLY Mr. Stachelhausen has been calling attention to the so-called "Gerstung theory," the essential factor of which is viewing a colony of bees as a unit; i. e., no single member is a perfect individual, but only a part of a body. In a sense this view is correct, but not to the degree claimed by Gerstung's supporters. In the "Review," of March, Mr. S. D. Chapman, writing on the causes of swarming, called attention to the proportions of old, young and middle-aged bees constituting a colony. These topics are interesting and worth investigating; but many observations must be made before it will be wise to do much theorizing. However, the every-day bee-keeper has, or should have, an interest in them to the extent that he should learn not to indiscriminately break up the normal proportions of a colony, or carelessly mix parts of the population of two or more. Much harm is often done by taking from or adding to a colony, brood or bees in such manner as to disturb the normal constitution of the population, and this is one of the reasons why colonies managed by systems of much manipulating are so often surpassed by those run on the "let alone plan."

It will repay the beginner, and also the rest of us, to observe carefully the population of colonies, the distribution of the brood, pollen and honey, make comparisons and try to obtain a clearer view of bee life and bee ways. There is a vast and unexplored field here in which even the novice has a chance to make valuable discoveries.

Among some of the systems by which parts of colonies are lopped from the parent stock and united to some other, is the one of moving a super together with all the bees in it from one colony to another, generally for the purpose of getting the sections completed, or for the purpose of starting upstairs some obstinate stock. If the transfer is made at such time as but comparatively few old or field bees are in the super, all will be well, but if at night or such other time as many field bees are in it, the chances are that the honey in that super will diminish rather than increase. It goes back to the stock the super was removed from, the field bees contained in it having turned most adept "thieves." Much the same occurs in the making up of nuclei, building up of weak colonies by adding brood or bees, etc. These results are more apparent when the honey flow is light or stopped than when it is heavy. To avoid these evils it is well to either rid the to-be-moved part of all old bees or else confine them for such period that when released they stick to their new location.

Transposing a strong and a weak colony for the purpose of strengthening the latter, causes a disturbance of the natural balance of parts of the populations, but the results are seldom appreciably harmful. Each lot of field bees on returning to the old stand and entering the now strange hive will run about as if queenless, often continuing such actions for twenty-four hours. If the lesser of the two colonies chances to be very weak its queen is often killed by the alien bees. Mr. Chapman and Mr. Stachelhausen have done well to call attention to these matters, now let the rest of us continue the work.

Providence, R. I., May 8, 1902.

Spring Desertion.

(By G. M. Doolittle).

QUESTION.—Will you please tell us through the columns of the American Bee-Keeper what is the cause of bees leaving their hives in the spring of the year, where said hives are clean, the combs bright and having quite a quantity of honey in them, and some brood? Three of my colonies have deserted their hives in this way on warm days, and although I have put them back, they will come out again on the next warm day. What can I do to remedy this matter?

Answer.—This is a case of what is termed "swarming out," by some, and "spring desertion" by others. In an experience covering nearly a third of a century I have had about a dozen such cases, and in each one it has happened after a hard winter, such as the past has been, and with colonies which had wintered rather imperfectly. Some think it is caused by the bees becoming discouraged, and abandoning further effort to keep up the temperature of the hive so as to keep the brood from perishing. In nearly every case which has come under my notice, colonies deserting their hives have become reduced in numbers to a greater or less extent by spring dwindling; while the number of bees, compared with the amount of brood, was ill proportioned, considering the outside temperature. I used to think that such swarming out could be accounted for on the ground of lack of stores, moldy combs, etc., as has been told us many times during the past in the bee papers, but after having several swarm out when all was clean and nice, the same as is spoken of by the questioner, I had to give that up and conclude that those who had told us that such was the cause had made a mistake.

Some seem to think that the chief cause of this swarming out mania lies in excitement on the part of the queen, the same happening at a time when few young bees are in the hive to keep company with the queen, when a general flight of the bees takes place, which often happens during the first warm days in early spring. During such occasions the queen becomes exited about being left with so few bees with her, goes to the entrance, takes wing, and thus joins the circling bees; and when once in the air with the bees, the whole alight as a swarm. But this hardly seems reasonable, because, as our questioner states, when we hive them back again in their own hive, they will swarm out again, and continue to so swarm out, till they generally enter some other colony or go off entirely.

As to the remedy, I doubt whether there is any better than to unite such with some other colony, although I have tried giving a frame of emerging brood from some strong colony to them, removing all of their brood and giving it to the colony from which the frame of emerging brood was taken. Next, place this frame of emerging brood together with one frame of honey next one side of their hive, and confine the bees to these two frames, by means of a dummy or division board, till they become strong enough to take more frames, when they can be built up to a full colony. This is a plan which I have used with good results where, from any cause, I desired to save just that individual colony. Since the queen-excluding zinc has become common, if I wished to save a certain colony for some special reason, I have simply hived back in its own hive the colony swarming out, and placed a strip of perforated zinc at the entrance, thus keeping the queen from going out; in which case the bees will return after each swarming out, and if the colony so treated does not wear out its vitality by continued swarming, and die from dwindling, it can usually be saved in this way. But, as I said, unless for some special reason we wish to preserve the individuality of any colony which once swarms out, the best thing to do is to unite it with some other colony, as the work required to make a good colony of such a discouraged lot of bees amounts to more than any ordinary colony is worth.

Borodino, N. Y., April 30, 1902.

Transferring.

(By L. E. Kerr.)

BEGINNING February 12, I have done more transferring this spring than ever before in my recollection.

Most anyone can make a success of transferring bees, if he will only have confidence enough in himself and use a small amount of common sense. Of course, one who has had no experience would make many blunders if he depended upon his own judgement too far. The first thing to be done in such cases is to read up on transferring in your books on bees.

The true sort of a bee man considers transferring great fun. The timid amateur, however, dreads the job. Right here lies all the difference, in transferring the combs. The first avoids using combs daubed and heavy with honey, and so keeps every thing clean and bright as a new dollar all through the operation, while the other ends with a conglomeration of sticks, honey, wax and dead bees, because he was so thoughtless as to use sticky combs of honey which should have been rejected.

In starting in to transfer a number of colonies first procure a frame hive full of combs, and run colony from box hive No. 1, into this; then you can carry their old combs into the honey house and assort them while filling up frame hive No. 2, to suit yourself, then tackle box hive No. 2, and run them on to the old combs of No. 1. This way will always give better results than tackling each hive separately.

Another important item is the transferring clamps. Strings are the only thing for fastening in the combs quickly and securely, that I know of. These should run lengthwise around and through the frame. This last is my own invention. Short pieces are passed over a long string, through the frame, between two pieces of comb, over a long string on that side, and then tied tightly, drawing the long strings up closely against the comb.

Wiring can be dispensed with if

Langstroth frames are used, but it is not necessary to leave them out, if you particularly desire them.

March 26 I began going over my transferred colonies for the first time. Every one contained plenty of bees, honey, brood, sealed and unsealed, and some young bees just hatched. Considering the fact that bees were more than a month later than usual getting to work this spring I have been quite successful.

Hurricane, Ark., April 19, 1902.

AN OFFICIAL SEAL.

THE GUARANTEE OF PURITY AND MERIT.

MR. EDITOR.—Sometime ago you asked me what the duties were of our honey inspector. As your readers may be interested in my reply I beg to present it through the columns of The Bee-Keeper.

Some years ago the Ontario County (N. Y.) Bee-Keepers' Association decided to place their good, white honey under the seal of the association. It was thought that a reputation for Ontario county honey could thus be bulit up. I do not know that it occurred to the instigators of the scheme at that time, that this seal might act as a guarantee of the purity or genuineness of the article. In these times of mistrust against even the genuine product of the bee it would seem all the more desirable that we should enact a scheme by which we could strengthen or regain the confidence of consumers of an article that we know is not, and never can be, successfully imitated. I do believe that, if a goodly number of the bee-keepers' societies all over our land would act in unison, adopt our system of sealing their honey, it would go a long way towards reestablishing the lost confidence.

Our rule is, not to send out any inferior honey under the seal of the association. Fancy and No. 1 white only are admitted. This rule is all right if the object is to create a reputation for a No. 1 article; but it is a question whether this is the best course to follow, when we consider that all honey is to be guarded against any possibility of suspicion. If I send out a part of my honey without a seal, would not the purchaser naturally think this to be an adulterated article? I confess I do not know what is the wisest thing for us to do.

The seal we use consists of a strip of glazed turkey red paper 4x14 inches, having the gold seal attached at the right of the reading matter with the official seal of the association impressed thereon. The reading is as follows:

"Ontario County N. Y. Bee-Keepers' Association Honey Stamp. This case of honey has been inspected by the honey inspector of the Ontario County N. Y. Bee-Keepers' Association, and the honey within, if seal is attached and these stamps remain unbroken, is guaranteed to be grade No. 1 white."

From the reading it appears that the stamp or seal is pasted around the case of honey in such a manner that the honey cannot be removed therefrom without breaking the seal.

The honey inspectors' business is to go to the different honey producers, on solicitation, and inspect the honey. If he finds it all right and up to the standard he attaches a seal to each case. For this service he receives from the owner of the honey eight cents per case, and fifteen cents from outsiders. He also receives mileage.

I am sorry to say not many members of our association have availed themselves of the privilege of sending out this honey under the seal of the association; but those who have, say they are well pleased with the success they have had. Freidemann Greiner.

Secretary Ont. Co., N. Y. B. K. Association.

Naples, N. Y., May 3, 1902.

We have recently, through the kindness of the manufacturers—The W. T. Falconer Mfg. Co.—been permitted to test a new smoker—the "Ferris." It is finished in the neatest style of any smoker we have seen; has an unique device for extinguishing the fire, by excluding the draft; a novel shield for protecting the operator's hand from the hot stove, and throws a good blast of smoke. The sample to hand has a stove nearly four inches in diameter, an ample valve and splendid bellows. It is doubtless another brain child of C. G. Ferris, the versatile inventor, who gave us the steam wax extractor which is now becoming so popular, and the wax refiner.

THE
Bee-Keeping World

AUSTRIA.

Winkler, of Vienna, advocates closing up the hives during unfavorable weather in the spring. He says, he has observed that on cool windy days sometimes nearly all fields bees were lost. To prevent the colonies from becoming uneasy and excited when shut in he has invented a peculiarly constructed ventilator, two of which are attached to each hive, one at bottom and one at top. These ventilators exclude all light. Confined bees are to receive water. (Bienenvater.)

Rev. Adamec says in Deutsche Imker, apiculture has sustained an injury by large importations of foreign honey bees.

Dr. Semeleder asserts that one of his colonies consumed 12 quarts of water from February to May. The bees had constant access to a feeder filled with water.—The doctor's bees must have been immoderate drinkers like the German friend in my town who said at court under oath, that he "drinked 27 glasses of hop-soda inside of an hour" (and didn't get befogged either.)

GERMANY.

A new bee book is advertised in German bee periodicals under the promising title, "Returning to Nature," or "Apiculture According to Nature." The writer of the book, E. Kirchner, has a superior hive to sell, which may account for the pompous title, and the unwarranted claim made. The hive may be a good one. It is made of straw and some wood; it is horse-shoe shaped and fitted out with suitable frames, selling, complete, for $4.25 to $4.75. Mr. Kirchner must have made a valuable discovery, for he says the bees can build only worker comb in the brood frames, while the cells of the combs in the honey chamber are of such depth that the queen cannot deposit eggs in them.

It is a common practice in Germany to strengthen weak colonies by the feeder process. A feeder filled with syrup is placed under a strong colony and when well covered with bees is removed and placed under the weak one. This is repeated several times. The younger bees remain with the weak colony to strengthen it. The older bees will naturally return to their own hive in the morning. The feeding, of course, is done at night.

Bienenzucht gives a long list of nectar secreting plants; it is also stated what the colors are of the different honeys. According to this list, location and nature of soil has a marked influence upon the color of the honey. For example the linden furnishes a dark-yellow honey on sandy alluvial soil, yellow honey on clay soil, dark honey on limestone soil. The color of locust honey changes according to soil from yellow to greenish and water-white, of Esparsette-honey from light yellow to red-yellow, etc. It has also been observed that the same plants will yield differently colored honey in different years. However, this may be due to a slight admixture of other honey.

Phacelia tanacetifolia receives great praise as a heavy producing plant of late in Germany. As is said, the plant is a native of North America. It is recommended as a fodder-plant, used in its green state. It may be cut two or three times in a season. The seed has a market value of $30 per 100 pounds. Five pounds of seed is sufficient to seed one acre of land. It is claimed the

Phacelia nectar contains but 55 per cent of water, which is a very condensed form of nectar. Of other plants the nectar contains as high as 75 per cent of water. Phacelia honey is said to be of exquisite taste and of a brownish color.

W. Gunther has observed that bees do not forget their location during a long winter's confinement and thinks it not advisable to change colonies about. The month of October he considers the best time to make any changes, if such seem desirable, as bees are not active during this time and are quite apt to mark their location when leaving their hives. (Deutsche Bienenfreund.)

Editor Reidenbach makes light of the new American bee disease, "black brood." He says, any brood comb left in a warm room and unprotected for a few hours will show black larvae, and says, substantially, the whole matter is an American humbug. (Phaelzer Bienenzeitung.)

AUSTRALIA.

The natives of Australia are very fond of the products of the honeybee. The manner in which they find bee-trees is very simple. When they observe bees carrying water from any pool, they carefully approach one as she is sipping water and spray her. For this purpose they have the mouth filled with water, which they administer Chinese fashion. The bee is then easily caught; a little flake of wool or cotton is then attached to her and she is liberated. The cotton hinders the bee from flying very fast and the native is enabled to easily follow her to the tree she inhabits. (Centralblatt.)

F. Greiner.

HONEY WAREHOUSE OF BRIDAT, MONT' ROS & CO., HAVANA, CUBA.

SECCIÓN ESPAÑOLA.

"The American Bee-Keeper" se envia á principio de cada mes. Si por algun motivo el suscritor no recibe su periodico á su debido tiempo, sirvase notificarnos y les enviaremos otro ejemplar.

Todo asunto relacionado con la Dirección y subscripción á este periodico, debe enviarse á "The American Bee-Keeper, Fort Pierce, Florida. El dinero puede remitirse por giro postal. El giro puede hacerse á The W. T. Falconer Manufacturing Co., en Jamestown, N. Y., cuando convenga más á los marchantes de esa casa.

Cuando el suscritor reciba el periodico con una faja azul es para avisarle que su subscripción termina con èse ejemplar. Esperamos ser favorecidos con orden para continuar la subscripción. Rogamos á nuestros corresponsales escriban los nombres y direcciones bien claro para evitar demoras.

Una faja roja indica que se debe la subscripción y esperamos su pronta atención al particular.

Subscripcion: 50 centavos al año.

MISTERIOS DE LA COLMENA

Guia del Apicultor Cubano.

por el

DR. JUAN B. PONS Y FONOLL

y anotada por el

DR. GONZALO G. VIETA.

(Continua.)

La obrera Ytaliana, se distingue prontamente por el brillante color amarillo de los anillos del abdómen en su base.

Unas son de color amarillo de oro y otras son color amarillo anaranjado ó color de cuero. Estas son la mejor variedad. Si es de pura raza, cada abeja mostrará tres bandas ó fajas amarillas.

Lo dos primeros segmentos ó anillos del abdómen y la base del tercero, son de color amarillo, el resto de color negro, en el dorso, y completamente amarillos en la parte inferior. Las patas tambien son de este color mas ó menos brillantes.

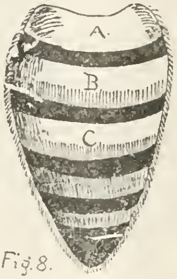


Fig. 8.

Los zánganos son mas variables, pues algunas veces, los anillos son completamente amarillos y otras veces oscuros, casi indistinguibles, pero la parte inferior del cuerpo siempre es de color amarillo.

Hay una variedad de abejas Ytalianas, llámadas *albinas* que presentanhileras de vellos blancos en el borde de los segmentos.

La progénie de una reina Ytaliana fecundada por un zángano negro ó alemán, ó al contrario, de una reina alemana y un zángano Ytaliano, será mestiza, mal llamada *hibrida* por los apicultores. Esta mestiza, se distingue de la raza alemana en que presenta fajas amarillas en los segmentos del abdómen, pero solamente dos, las correspondientes á A. y B. de la Fig. 8, de modo que, para distinguirla de la verdadera Ytaliana, no hay mas que ver si presenta los tres primeros anillos A. B. y C. de color amarillo. Si no presenta mas que los dos primeros A. y B. podemos decir, con seguridad, que es *hibrida* ó *mestiza*. Este cruzamiento, ó mejor dicho, el producto de este cruzamiento, presenta todas las buenas cualidades de la raza Ytaliana, y todos los defectos de la alemana. Son buenas recolectoras, prolíficas, defienden bien la colmena, pero en cambio, son mas irascibles, mas inclinadas á picar y al robo.

Los zánganos hijos de una reina Ytaliana, fecundada por un zángano aleman, son Ytalianos puros en virtud de la *parteno genesis* y los hijos de reina alemana, fecundada por un zángano Ytaliano, seran negros ó alemanes. Este hecho debe tenerse muy presente al tratar de Ytalianizar un colmenar ó apiario.

Si en un mapa de Europa tiramos una linea diagonal, que empezando al N. de la provincia de Génova, en Ytalia, termine en Trípoli (Africa) á través del Mediterráneo, veremos que las abejas, al E. de esta línea, son de raza amarilla (Ytalia, Grecia, Turquía, Siria, Egipto), mientras que al O. solo se encuentran abejas negras ó grises, (Tunes, Argel, Marruecos España, Francia, Alemaniay parte O. de Zuiza. En el N. del Mediterráneo, los Alpes son el límite y el Desierto de Libia forma la barrera del Sur.

Razas de Chipre y Siria.

A. D. A. Jones yá Frank Benton, debemos el estudio y cultivo de estas razas. Mr. Benton cree que las abejas de Chipre son descendientes de las de Siria, asi como las Ytalianas descienden de las Chipriotas. La abeja de Chipre se parece mucho á la Ytaliana distingniéndose en una raya de color amarillo de cuero en el anillo posterior del torax.

Son mas activas y las reinas mas prolíficas que las Ytalianas de pura raza.

Las de Siria se encuentran en la Turquia Asiática y Palestina al N. del Monte Carmelo. Se pare con mucho á las Ytalianas; son muy activas y pro líficas; son mas amarillas cuando son adultas pues cuando acaban de nacer son de color mas oscuro, no tienen inclinacion á picar y se manejan facilmente.

La abeja de Chipre, solo se encuentra en esa isla, no son muy apacibles y tranquilas. Son exelentes recolectoras tanto, que escenden en ésta cualidad á todas las otras razas conocidas. Los opérculos de sus panales son muy delgados y ténuos de modo que la miel se derrama con facilidad. Son mas prolíficas que las Carniolas. En cuanto á su caráter, dice Mr. Benton, que no se apaciguan con el humo, y cuanto mas se les ahuma, mas irritables, se vuelven. Son muy sensibles á la luz; de modo que al abrir una colmena hay que hacerlo gradualmente.

Mr. Benton cree que para dedicar á miel extraida, son las mejores del mundo.

Las Carniolas, llamadas tambien de Krainer, por que proceden de la montañosa region del Krain en Austria, son de color negro ó gris de acero, pero muy poco diferentes de la abeja alemana, y son mucho mas grandes que las Ytalianas. Son exelentes recolectoras de miel y operculan los panales con cera blanca. Producen mucha cera y recogen muy poco propóleos. Son muy prolíficas, aunque no tanto como las razas orientales, y en cuanto á su cáráter, no se le pueden comporar las otras razas, por su bondad y su poca inclinacion á picar. La pérdida de su reina les afecta grandemente, y en cuanto al robo, no son peores que las otras razas. El defecto mayor, es la inclinacion que tienen á enjambrar con esceso.

Las abejas de Dalmacia se encuentran en la costa E. del Mar Adriático. Son parecidas á las Carniolas, exelentes recolectoras de miel, pero son muy vengativas é irritables.

Las abejas Aticas ó del Monte Himeto, se encuentran en las llanuras del Atica, y son las recolectoras de la famosa miel de los Dioses, de las antiguas epócas. Se parecen mucho á las Carniolas, aunque son muy irritables, son muy buenas recolectoras de miel. La aficion á picar y su cólera las hacen poco simpáticas para el cultivo.

La abeja de Tunez ó Pùnica se encuentra en el Noroeste de Africa. Se parece mucho á la abeja alemana aunque es mucho mas negra y mas pequeña que las Ytalianas.

Vuelan muy rápido y son buenas recolectoras de miel, activas, buenas constructoras de panales, pero en cambio, son muy inclinadas á recoger propóleos con el que, á veces, casi cierran la entrada de la colmena. Es tanto el propóleos que recojen, que á veces cubren con él los opérculos de los panales. Son muy vengativas é irritables, y por lo tanto, deben proscribirse de los colmenares.

La Apis flórea—construye sus panales

al aire libre en las ramas de los árboles, y no se pueden domesticar.

La Apis índica—Son muy pequeñas, con cinco fajas ó bandas amarillas y aunque pueden cultivarse son poco productoras.

La Apis dorsata—Es la mas grande de las abejas cuya descripcion hemos hecho en páginas anteriores.

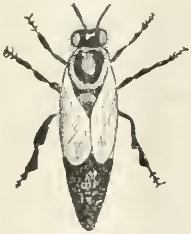
CAPITULO II.

Anatomia y fisiologia de la abeja.

En cada colonia de abejas hay tres distintos individuos que difieren en forma, color, estructura, tamaño, habitos y funciones. Asi tenemos, la Reina, y un nùmero mas ó menos grande de machos ó zánganos y un mayor numero de obreras ó néutras.

La Reina.

La ùnica abeja fértil ó fecunda de la colmena, la madre, es á la que se ha dado el nombre de *Reina* y es la unica hembra fecunda cuya sola funcion es poner huevos en las celdas. Sus ovarios son tan grandes, que casi ocupan su largo abdómen y están situados uno á cada lado de la cavidad abdominal, y desde ellos es estienden los dos oviductos, los cuales se unen formando un solo conducto por el que pasa el huevo al ser depositado.


Reina.

En la Reina de abejas asi como en todos los himenópteros el oviducto está en relación con un saco llamado *espermateca* el cual recibe el sémen del macho en el acto de la copulacion.

Este saco, fué descubierto por Malpighi en 1686 pero sus funciones no fueron demostradas hasta 1792 por el gran anatómico J. Hunter.

Los ovarios son órganos multitubulares, alcanzando el nùmero de mas de cien tubos en cada uno. En estos tubos crece y se desarrolla el huevo cuyo número es muy variable. El extremo del oviducto se llama *ovopositor* está constituido de anillos circulares y concéntricos.

La Reina, como todos los individuos pertenecientes al órden de los Articulados, tiene su cuerpo dividido en tres porciones distintas, bien marcadas; la cabeza; el tórax y abdómen.

La cabeza, contiene los órganos de la boca, los ojos simples, los compuestos y las antenas. Los órganos de la boca son los mas prominentes y consisten, en un labio superior ó *labrum*, un labio inferior ó *labium* y dos pares de quijadas que se mueven á un lado y ótro de la boca; las mas fuertes y gruesas, se llaman *mandibulas* y las mas membranosas y mas largas se llaman *maxilas*.

El *labrum* ó sea el labio superior, está unido por una articulación ó juntura al *clipeus* y éste último al epicráneo el cual contiene las antenas y los ojos. El *labium* ó labio inferior, forma el suelo de la boca cuya base, bastante ancha, forma el *menton* y desde éste se extiende la *ligula* ó lengua. Cerca de la union de la *ligula* y el *menton* se insertan los dos *palpos labiales* y en el ángulo formado por éstos y la ligula, se encuentran los *paraglosos*, uno á cada lado.

Las mandíbulas, se insertan una á cada lado del *labrum* y debajo de éste, y están provistos de dientes rudimentarios. Debajo de las mandíbulas y un poco mas léjos, se insertan el segundo par ó *maxilas* menos densas y firmes que las mandíbulas. Cada maxila se inserta, por medio de una pequeña juntura, al *cardo* y proximo á éste, se encuentra una mas grande juntura, hácia afuera de los anchos *lacinia*, las *estipas*, y al lade de éstos se insertan los *palpos maxilares* los que son muy cortos.

Las antenas situadas, entre, debajo y al frente de los ojos compuestos. Están acodadas y la primera articulación, que es la mas larga, es el *scape*, y las demás junturas, el *flagellum*.

La antena, es un órgano sumamente delicado, que esta circundado de un sin nùmero de nervios que terminan en vellos tactiles sumamente sensibles.

Continuará.

THE AMERICAN BEE-KEEPER

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H. E. Hill,
Fort Pierce, Fla.

Subscribers receiving their paper in blue wrapper will know that their subscription expires with this number. We hope that you will not delay favoring us with a renewal.

A red wrapper on your paper indicates that you owe for your subscription. Please give the matter your early attention.

Editorial

If you feel that you can speak favorably of The Bee-Keeper to your acquaintances who are not taking it, without offending your conscience, and will do so, you will thereby confer an obligation upon the editor.

Brother Hutchinson, of the Review, says neatness can be carried to excess; but in all his travels among bee-keepers he has not found an instance in which it appeared to have been done.

Have you a bee-keeping neighbor or friend who is not a subscriber to The Bee-Keeper? If so, will you not let us have his name, and do what you can to assist us in enrolling him upon our list?

We are still offering a year's subscription for ideas expressed in writing. The idea, of course, must be pertaining to bee-keeping, and of interest to the fraternity. Have you one to exchange?

Our thanks are due many of our readers this month for their kindness in having sent in lists of bee-keepers' names, to whom we are sending sample copies. More than ought else, we appreciate these expressions of kind remembrance.

The Irish Bee Journal, published at Lough Rynn, Dromod, Ireland, and edited by J. G. Digges, M.A., celebrated its first birthday last month. It is a promising youth, and a welcome acquisition to our exchange table. Brother Digges gets out one of the best.

We are in receipt of a copy of the Report of the Proceedings of the Thirty-Second Annual Convention of the National Bee-Keepers' Association, which was held last September at Buffalo. In addition to the complete report, the book contains a list of the names and addresses of the members, the constitution, and many portraits of those active in the work. It is conveniently and neatly gotten up, contains about eighty pages, of this size; costs 25 cents and is published by Geo. W. York & Co., 144 Erie st., Chicago.

The latest acquisition to our exchange list is the Jamaica Times, the official organ of the Jamaica Bee-Keepers' Association. The apicultural department is edited by Secretary C. W. McHardy, and contains much of interest to the bee-keepers of this charming isle of the Caribbean. In welcoming the Times to our table, we might suggest that its interests and influence would probably not become less were it to give due credit to The American Bee-Keeper, for the columns of matter taken therefrom.

A photo engraving shown in this number will give a glimpse of one of the rooms in the establishment of Messrs. Bridat, Mont Ros & Co., Havana, Cuba. This house is doubtless the most extensive exporter of honey on the island; their annual sales approximating half a million dollars. The honey is put up in tierces holding 112 gallons each, of which the greater portion is shipped to Hamburg, Germany. During last March a Bee-Keeper representative called upon the firm at its immense place of business, 35 Mercaderes street, and was pleasantly received by the proprietors. It was there learned that the monthly shipments were something in excess of 500 tierces. Of the honey then in sight upon the floors of the establishment, probably not one-tenth was within range of the camera; but the picture will serve to give our readers a glimpse of the peculiar architecture characteristic of that country, the busy workmen and checking clerk who have charge of this department and a typical native bearing a bale of tobacco near the foreground. This house is also extensively engaged in the export trade otherwise; and import largely of the island's necessities from foreign countries, including Falconer's bee-keeping supplies, upon which it has a large and increasing trade.

CONCERNING OUR MUTUAL INTERESTS.

With the recent influx of new subscribers comes renewed hope of a realization of our dream of the past—a dream of a larger and better journal than we are yet able to give our readers. In fact, we are so much encouraged that we shall put forth an extra effort to begin the new year with a list sufficiently large to justify a long step in the direction of our cherished ambition. We believe the bee-keeping industry worthy of something handsomer and larger than any magazine now published in its interests.

By authority of the publishers, the editor has undertaken to materially extend the circulation during the remaining seven months of the current year, in order that he may introduce some of the projected improvements with the beginning of 1093. Success in this line presupposes the good will and kind co-operation of the majority of our present subscribers. We want to appoint each member of every household into which The Bee-Keeper now goes, a representative of the journal, with authority to distribute sample copies and solicit subscriptions. We know, by what some of our friends are doing in this way, that thousands of new names may be added to the list before the December number is issued, if our readers will give the matter a little attention. We do not ask this wholly for our own benefit; but to the end that we may be able to give our readers greater value than at present, for their fifty cents. Neither do we ask it without offering direct compensation for the service. This journal, thus far, has not deemed it advisable, nor good business form to ask alms from any source. It stands strictly upon a "value received" basis,is always grateful to its supporters, and earnestly endeavors to serve the interest of its patrons. With a wider circulation, it would be enabled to give greater value without increasing the cost to the subscriber. That's what we are striving for, and hereby invite each reader to co-operate with us to that end, and tender the following propositions:

1.—When requested to do so, we will be pleased to extend the date of expiration six months, to each subscriber who will send us one new subscriber, at 50 cents a year. The remittance to accompany the order.

2.—When so requested, we will enter every new subscription received this year to begin with number following date of receipt, and to expire with December, 1903. Thus, all subscriptions received at the regular rate of 50 cents a year, during this month, will entitle the new subscriber to eighteen months' numbers—the remainder of 1902 and all of 1903.

3.—When preferred, and the subscriber says so, we will enter the new name to expire one year from date of receipt, and send all the back numbers for 1902. This offer remains good only during this month, and is necessarily limited to the stock of back numbers on hand.

The agent, in any case, is entitled to six months' extention on his own account. Furthermore, it being understood that no list of less than ten new subscribers will be awarded the "Grand Prize," the editor, personally will pay for the American Bee-Keeper Five Years in Advance to the subscriber sending in the largest list of new subscribers before January 1st, 1903.

If a cash commission is preferred, write us, and we shall gladly quote generous terms. We want at least a thousand new subscribers before January. If our readers will kindly help us to secure them, we will endeavor to convince them that it is to their interest to stay with us. What do you say?

Ah,—thank you!

A NEW STAR.

The Bee-Keeper Discovers one in the Apicultural Firmament.

A recent acquisition to our local bee-keeping fraternity is a somewhat mysterious individual of stalwart physique who enthusiastically proclaims, in broken English, an endless array of the most magnificent theories in relation to the bee-keeper's art, that it has been our pleasure to listen to since our interest in this fascinating subject was awakened.

It was a chilly morning, last spring, while the thermometer was away down to 65, or thereabouts, and a gloomy March sky overhead, that The Bee-Keeper man sought vainly for a subject that would stimulate a more active circulation of the blood and divert his mind from the sombre weather conditions which temporarily obtained, that the new bee-keeper walked into the sanctum, apparently in a great hurry, and inquired whether we could not supply him with a few hundred colonies of bees, as he had decided to engage in the business on the coast. The very many prevalent falacies abroad in the land were forthwith elucidated, and the cause of failure in all cases so lucidly explained as to cause his audience to marvel at the stupidity of the fraternity.

At this writing, the new bee-keeper is discharging from a steamer something like 300 colonies of bees in a very limited range, on the islands near Fort Pierce—a range already containing nearly 200 colonies. The gentleman, upon the painted side of a hive, with occasional intermissions in which a new point is given his well-worn pencil, clearly shows by figures, the exact area of the accessible field range, the number of bees in the field at this date and the number for each month hereafter, the approximate nectar producing capacity of the territory, and the utter impossibility of the bees to gather ten per cent, of the product. Overstocking, he asserts, is one of the most ludicrous notions of our time. "That extensive increase is obtained at the expense of the honey crop," says he; "is an idea even more foolish. It is impossible for any one to secure a full crop of honey without at least doubling his colonies. If he will but increase them by my method to a still greater extent, his crop of honey will be proportionately increased."

The gentleman expects to invade Cuba this fall with from 800 to 1000 colonies—the product of his original 270, with which he began the present season—and says he will be in Ft. Pierce next spring with not less than 2000 colonies, which he will make from the 800 or 1000 which he will take over this fall.

"Where will this thing end; will not a few years of this high pressure system of yours result in securing more bees and more honey than you can handle?" inquired the Bee-Keeper man.

"Not a bit of it," says he, with emphasizing gesticulations, "there is no limit. Ranchmen number their herds by the tens of thousands; the successful farmers in the West have their thousands of acres, and there is no reason why the same rule should not apply to bees."

The gentleman has some original methods in handling bees, and we shall watch his course with much interest, and acquaint our readers with his plans and progress as they develop. We have already secured some interesting pictures of his apiaries, etc., which will appear in these columns. In the meantime, we give W. L. Coggshall due warning to clear the track. The gentleman says he has had ten years' practical experience as a bee-keeper, and has observed and practiced the intricacies of the art in many different parts of this and the old world. The gentleman has subscribed for the Bee-Keeper, but prefers to call at the office for his paper, rather than have it mailed, and objects to publicity very emphatically; so our readers will please say nothing about the matter to their neighbors. Just keep it quiet and through the columns of the Bee-Keeper observe the new star.

THINGS NEW OR WONDERFUL.

The appearance of an advertisement of a moth-proof hive in this journal has elicited some criticism upon the part of an exchange, the inference being that such contraptions are useless, and therefore liable to deceive the inexperienced. The editorial and business departments of The American Bee-Keeper are entirely separate, and advertising contracts are invariably effected through the home office, by the publishers and proprietors, The W. T. Falconer Manufacturing Company, Falconer, N. Y., and we are sure that the publishers are as careful as possible to see that none but responsible persons and firms use these columns. We presume any man who thinks he has discovered a moth-proof hive, or a method for mating queens in confinement, or a metalic brood comb, a strain of bees with tongues an inch long, or a nonswarming variety; a practicable plan for mating one thousand young queens in one thousand section boxes; a hive, the construction of which prevents disease; the greatest, best and only bee journal, of any of the other suspicious things of which we occasionally hear, it is his privilege to advertise the fact and invite investigation. If he chooses to make a charge of two cents or a half-dollar for furnishing particulars regarding his eighth wonder of the world, that is also his privilege, we presume; and those who desire to invest in such information have the right to do so. However, if any reader of this journal at any time desires the personal opinion of the editor in regard to any moth-proof device or hive, or any of the many other wonderful things the mention of which has arrested his attention and interest, he has but to write and request it. It's free, and will not take long to give it.

THE COMING CONVENTION AT DENVER.

Of course, we naturally expected, that if the National Convention went out to Denver that those western people would do the handsome thing, but the present indications are that they are going away ahead of anything that any of us have dreamed of. Some things have come to me in private letters, giving hints of what may be expected, but all of their plans are not yet sufficiently completed to be given to the public; however, I have a letter from Secretary Working, that I have permission to publish, and here it is:—

Denver, Colo., April 26, 1902.

Mr. W. Z. Hutchinson,
Flint, Michigan.

Dear Sir:

We have put both feet into it! Yesterday and the day before our executive committee (Harris, Gill, Rauchfuss and Working) made the preliminary arrangements for the big meeting in September. Following are the chief points decided upon:

The Colorado Association will meet on Tuesday morning, September 2, and devote the day to business, in the evening and the following days taking part in the general sessions of the National Association. Our program committee will work with yours.

We will give a complimentary banquet to members of the National Association coming from other states than Colorado and a "Seeing Denver" trolley ride to all the attractive places in the city to the same people. Our members and those of your association who have the good fortune to live in Colorado will have the good fortune of sharing in these pleasures for a fixed price—to be fixed later.

We will plan for special excursions at low rates to places of interest in various parts of the state.

We gave our committee on exhibits fifty dollars and the authority to beg a thousand for the purpose of making a great exhibition.

We decided to "spread" ourselves in such a way as to make the visiting bee-keepers forever proud of having attended the Denver meeting, and those who don't come, everlastingly ashamed of themselves. And we have persuaded the mayor of the city and the governor of the state to do their utmost to make the occasion memorable; and the men who hold the purse-strings of the city are interested. Promises later. Then, too, the secretary of the Denver chamber of commerce, who is a past master in such matters, has become an enthusiastic member of our banquet committee—a committee that is not too big to do things.

That ought to be enough to tell you now. You are to tell us when we may give the banquet. You are to name us three men, including yourself, who will respond briefly and thankfully to addresses of welcome by President Harris, Governor Orman, and Mayor Wright. As for the banquet, you are to prepare for it and nothing more—to be in good humor, in good appetite and in large numbers.

As for our people? With the kind cooperation of the railroads, we'll bring them to Denver in crowds. There'll be as many of our folks as of yours, if you dare! And before we are done with you, you'll be ours and we'll be yours.

Scatter the news! Tell it in Gath and Askelon. We'll tell it wherever Denver papers circulate.

Yours truly,
D. W. Working,
Secretary Colorado State Association.

It is very evident to me that the man who misses the coming convention at Denver will miss the treat of his life time. I expect to see it outstrip its predecessors in every possible manner—and that is saying a great deal. But look at the conditions: In the heart of the great West, and for the first time. Bee-keepers of both high and low degree, all over the West, will flock to it. The local arrangements, upon which the success of a convention is so largely dependent, are in the hands of very capable men. The rates on the railroads will be low. It is at the right time of year—before cold weather, and after the work and heat of the season are over. The sights to be seen in and around Denver are equal to any on earth. Go to Denver, meet the boys, have one grand holiday, and go home loaded with enthusiasm and new ideas—the two things upon which all successes have been builded.

W. Z. Hutchinson.
President.

Literary Notes.

The American Bee Journal says State Inspector of Apiaries, N. E. France, Plattsville, Wis., has issued an 80-page pamphlet, fully illustrated with pictures of apiarian fixtures and Wisconsin apiaries, which is really a pamphlet on practical bee-keeping. It is to be sent free to anyone who may ask for a copy, providing the applicant lives in Wisconsin. It's no use for outsiders to write for one, however; for they are not for sale. If any reader desires a copy, in order to know what is going on in the apicultural field of Mr. France's home state, he must first move to Wisconsin, then advise the inspector of the fact that he is domiciled within the proscribed limit, and request a copy of Bulletin No. 2. We believe there is no law at present to prevent anyone from moving out of the state after having secured a copy of the pamphlet.

A QUICK CURE FOR BEE STINGS.

First pull the sting from the flesh, then bruise the fresh leaves of the common weed known as vervain and rub the wound well with them, after which bind to it a plaster of the crushed leaves well moistened. This will prevent swelling and ease the pain. Vervain may be used in its dried state by steeping the leaves in hot water. It is gathered in September by negro nurses in the South and hung up to dry for winter use.—May Ladies' Home Journal.

A series which should have been named "The Enchantments of our Modern Aladdins," if considered solely from the point of view of romance, is begun in the May Cosmopolitan. But these sketches possess as well a business interest equally for clerk and capitalist, for manufacturer, farmer and merchant. The man who would understand the drift of our news in finance and business must read these lives, so full of incident, of chance, of hard labor and marvelous success. As it is the series receives only the common-place name of "Captains of Industry." Each character is treated by a noted writer familiar with his subject.

WHAT TO EAT, FOR MAY.

Waldon Fawcett's article on "Modern Dining Cars" is a splendid resume of the working of the system of which travelers are fed. The hand of Mrs. Carrie Nation is an interesting study in Nellie Simmons Meier's "Practical Talks on Palmistry." "The Club Woman and Her Toast" by Laura A. Smith, together with the collection of "Famous Toasts" are articles of widespread interest. W. D. Nesbit, the humorist, has an original poem "Adulteration's Limit" and hereafter will contribute original after-dinner stories. The editorials consider "Vegetarians vs. Meat Eaters," "Facts About Adulteration," "Harmony and Gastronomy and "Chew Slowly." "The Youngster" is a charming story of art student life in Paris, by Kilbourne Cowles. The magazine has the usual number of original entertainments, practical recipes and miscellany.

The association is prospering finely, new members are enrolled daily, and shipments of honey are sent abroad by every steamer. On Thursday 70 barrels went and for the next steamer it is expected that not less than 100 barrels will be ready.—Jamaica Times, May 3, 1902.

HONEY AND BEESWAX MARKET.

Kansas City, Mo., May 8.—We have a fair demand for honey with a good supply. We quote comb, 10 cents to 12½. Extracted, 5½ to 6½ cents. Beeswax in good demand with light supply at 30 to 32 cents.

Hamblin & Sappington.

Buffalo, N. Y., May 7.—Demand for honey is gradually decreasing and we advise any who have old honey to sell to market it. Strictly fancy comb honey, we quote, 14 to 15 cents; No. 2, 11 to 12 cents; No. 3, 9 to 10 cents. Beeswax wanted at from 25 cents to 33 cents, as to quality.

Batterson & Co.

Boston, May 8. 1902.—We quote our honey market as follows: Fancy, 1 pound cartons, 16 cents; 1 pound, glass fronts 14 to 15 cents; No. 1, glass front cases, 13-14 cents; No. 2, none. Ample supply and light demand.

Blake, Scott & Lee.

Chicago, May 8.—The trade in honey of all kinds is light, especially is this true of comb, the little trade that exists is for the best grades. Basswood ranges from 14 to 15 cents, that having more or less basswood willow or other white nectar 13 cents; off grades of white 10 to 12 cents, amber 8 to 9 cents, extracted white 5½ to 6 cents, amber 5 to 5½ cents, some lots of new extracted offered but no sales have been made.

Beeswax is very scarce and can be sold upon arrival at 32 cents.

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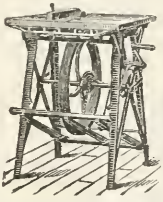

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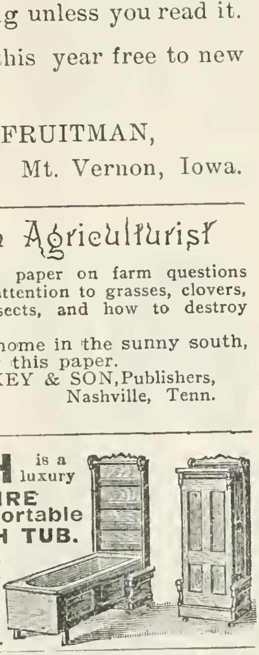

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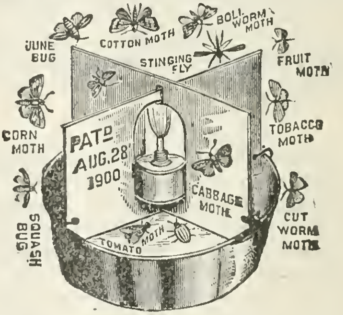

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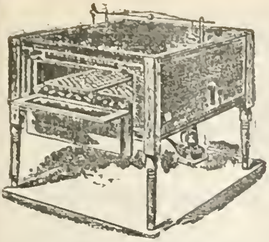

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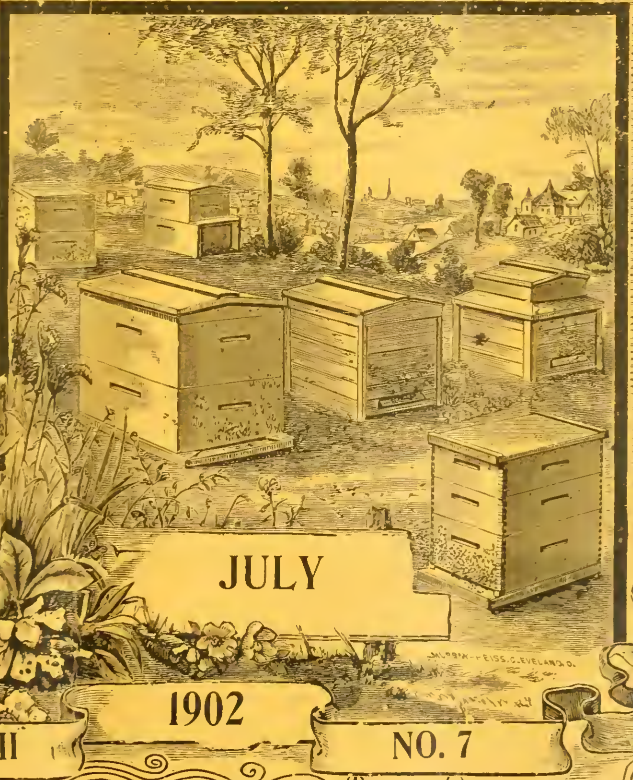
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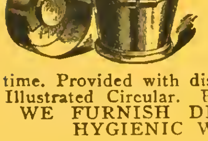

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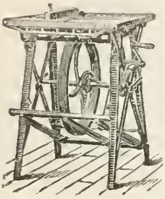

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Vol. XII JULY 1902 No. 7

Leaving Honey in the Hive Till Fully Sealed--Honey Candying in the Comb, Etc,

(G. M. Doolittle.)

QUESTION:—Would you leave honey on the hive till all or nearly all the cells containing honey in the sections are sealed over? Or would it do to take the sections off while there are quite a few unsealed cells having honey in them? Please answer through the American Bee-Keeper.

Answer:—I would always advise leaving honey on the hive till it is sealed, with the exception of times when other honey of different color or inferior nature is likely to be mixed or stored with it. Other things being equal, the fewer unsealed cells there are in any section of honey, the better price it will bring in the market, and all should strive to put their honey before the people in the most marketable shape. But where there comes a time, or season where dark or inferior honey is likely to be mixed with the white or best, the "other things" would not then be equal; hence I think it better to take off all sections, whose combs in which are three-fourths sealed, when this dark honey is about to be mixed with it, and try to ripen them so that they will be fairly good for market, for such sections of honey if properly attended to will bring very much more than they would after they were left on the hive for completion. The "properly attended to" consists, in my opinion, of storing said honey, as soon as taken from the hive, in a dry airy room, which can be kept at a temperature of about ninety degrees, for, in such a place the honey will be growing better all the time, whether sealed or unsealed. In this way honey soon becomes so thick that the honey in these unsealed cells will not run out in crating or marketing, and if tipped over so that the cells stand on end, as it were, not a drop will be found to daub other sections or the case or counter where it is stored. If the reader has been a close observer he has noted, that it is the "dauby, sticky mess," that is always used as the reason why honey that is unsealed should not be taken from the hives. Why honey in unsealed cells seems to swell, and gets thin and sour, and runs all over things, is because the honey is kept in an improper place, such as a cellar or other cool damp room, where the best of honey will deteriorate in time,and become unfit for food. But at this day and age of bee-keeping, all should know that such are not proper places in which to store honey, and the more that is said in our bee papers against so storing, the sooner will all bee-keepers know better than to do so. With the right kind of a place to store comb honey, I think it is always best to take all sections which are from two-thirds to three-fourths sealed over off the hive just before the flow of inferior honey commences, store them for a time as above advised, and then crate them by themselves, so as to make a grade of such honey by itself. When so treated, I find that it sells at from two to three cents per pound above buckwheat honey, and this proves that Mr. Quinby was right when he said in the sixties, that "all boxes two-thirds sealed over, containing white honey, should be taken off before buckwheat honey was stored in them at the beginning of that yield, as partly sealed boxes of white honey would bring more than when finished with dark honey."

HONEY CANDYING IN THE COMB

Question:—A neighbor tells me that honey never candies in the combs, and thinks it strange that I think otherwise. I am sure I have seen comb honey candied, and I told him that honey did candy in the comb. Which of us is right?

Answer:—If the honey is left in the hive the year around, then your neighbor may be very nearly correct; but I have never, in my recollection, had sealed honey away from the bees over winter without its candying, except where it was stored in a room kept warm by a fire all the while. Now, while this candying of honey in the combs is of no great disadvantage when such honey is to be used by the bees for the purpose of feeding themselves, yet it is a great misfortune to have section honey candy, for it spoils its looks or its selling readily in the market, and, as far as I know, there is no way of getting it from the combs, or of liquifying it in the combs by any plan, which will leave it in shape to ever become marketable. Where we have much section-honey which is liable to be left, so as to go into the cold of winter before it is sold, it is always best to carry it into a room where the temperature is kept at from 70 to 75 degrees all the time for where so left, it will not candy, and will keep perfectly for an indefinite number of years. I once visited a bee-keeper in the dead of winter, and noticed that he had a portion of one side of his living room, near the stove partitioned off by a large curtain hanging down from the sealing above. After a little I was that curious to know what was behind there, (mistrusting that he had comb honey behind) that I asked him about it. He immediately lifted the curtain, and behind it was nearly two tons of comb honey all nicely crated for market; the crates so piled that the warmed air from the base-burning coal stove, which made this room so comfortable during winter, could circulate all about each crate, and in this way he had kept honey from a year of plenty over till a poor year, and reaped a good sum of money on the extra price he obtained in the poor year, over and above what he could have gotten for it the year before. He had some of this honey on the table for supper, and I thought it of better body and flavor than was the same honey the fall before, as I had sampled his honey during the September before.

Could a large store-house be built and kept at the right temperature during winter, I believe it would pay bee-keepers well to store their honey and hold it over when there were years of a downpour of honey, and thus make a good thing by the high price in a year of scarcity, as well as to keep from breaking down the market by rushing all produced in the plentiful year into market during the fall and winter of the same.

Borodino, N. Y., May 29, 1902.

INDEPENDENCE OF THOUGHT.

IT IS URGENTLY RECOMMENDED IN THE STUDY OF APICULTURE

(Arthur C. Miller.)

APPARENTLY one of the needs of bee-keepers today is closer observation. We look but do not see. Since the beginning of bee culture it has been the belief of observers that bees offered food to the queen, drones, and to each other with their tongue. I too believed this and for nineteen years thought I so saw it but closer observation induced by a study of the structure of the bee, led to the discovery that the former belief was an error. After once having seen how the feeding was actually done I wondered how I could ever have thought I saw otherwise. Many theories of practice have been built on the erroneous idea of feeding, and I think it will be found that other practices in regard to bees are founded on equally erroneous beliefs.

For a long time it has been claimed that the Italian bee was superior to all others, and any attempt to controvert such belief has been met with vigorous opposition. It is not my purpose to assign any reasons for this, but only to ask that each bee-keeper carefully watch and test for him or herself the different races and crosses. I venture to assert that a careful and unprejudiced examination will show things that will prove a decided surprise to many. I have in my apiaries some of the best strains of Italians to be obtained, also some pure Blacks, and many shades of the crosses of the two races. According to the generally accepted view regarding Italians, such colonies should excel the others, but that has not proven to be the case. The Black bees have bred up the fastest, have stored the most honey and entered the boxes most readily. Also they have proved to be better tempered. The hybrids came next to the Blacks in the posession of these virtues, and the Italians last. Such has been my experience this spring and the contrast has been so marked that I have considered it worth recording. The Blacks will not cling so quietly to the combs during manipulations, but that is as often an advantage as otherwise. The novice must not judge from this that the black bee is the ne plus ultra in beedom, but before discarding the queens he has, let him study the character and work of their progeny most carefully. In this connection he may discover that some colony is not as populous as it should be, and that it does not increase rapidly. The bees may seem to be hustlers, good comb builders and gentle, and he may think it wise to rear a new queen from such stock. Before doing so, exchange the queen with one from some other colony and watch the results. Not infrequently they are anything but what was expected. Both queens seemingly lay equally well but the lesser colony gains no better than before, while the other colony thrives as usual. But when the young bees from the transposed queens begin to get numerous a change will be noted. Are the bees from the poorer queen cannibals or simply poor nurses? It is well to consider these things before condemning a new or purchased queen.

Again, in judging of the comb building qualities of a colony, try to estimate the relative proportions of old and young bees; if the former predominate the wax work will be slow and poor; if the latter are in the ascendency the work will be quite different.

Things are not always what they seem and effect may be due to causes quite foreign to what we believe. Ofttimes the novice will see what the veteran fails to notice because the former looks with no preconceived notions. A too implicit faith in the text books is accountable for the long life of many an error. By all means let the novice familiarize himself with some one or more standard works on the bee, but let him go to his bees feeling that what he has read may not be right, and that to be sure he must see the things for himself and prove them. If we will assume this mental attitude we may hopefully look for a great advance in bee culture.

In the A. B. K. for April, Mr. McNeal spoke of the value of old black comb with brood for drawing bees into the supers. He is quite right, but old black comb empty and dry will work almost equally well. The only word of caution needed in regard to the use of such combs is to have them sound and unbroken, for if the bees have to pull away and repair parts of them the removed bits not infrequently are worked into the new combs in the boxes.

Providence, R. I., June 2, 1902.

A New System of Bee Keeping.

(Adrian Getaz.)

THE GREATEST subject now discussed in the European bee papers is a method of bee keeping invented by Mr. Preuess, a German leading apiarist. It has been published in pamphlet form, both in German and French. The method is briefly this:

1st.—As a number of bees come out in the fair days of the latter part of the winter and early spring, and get chilled before they can return, heavy losses result. To prevent these losses, Mr. Preuss places before the hive an additional department, which can be darkened. The bees can come in this apartment or vestibule, (they call it a "consignator") whenever the weather induces them to come out. As bees must have plenty of water, a water feeder is attached to the "consignator." Unfortunately, the number of the Progres Apicole containing a full description of the consignator has not reached me. Mr. Greiner might, perhaps, find something in the German papers.

2nd.—Equalization. That is taking brood from the stronger colonies to strengthen the weak ones. This is almost an entirely new thing in Europe.

3rd.—Transposition. The hive is what we would call here a double decker, two bodies, one on top of the other. The transposition consists in changing the place of the two bodies, putting the lower one on the top. The queen starts then anew, in what is now the lower story. This prevents swarming effectually. It will be perceived that this method applies exclusively to raising extracted honey.

4th.—Reclusion. That's what we would call here "contraction." The queen is confined on two combs only by means of a perforated zinc partition. The honey which would have been used for a large amount of brood is saved, and a number of what we would call here "useless consumers" are also saved or rather the honey they would have consumed.

5th.—Fall feeding. Later in the season, sugar feeding is resorted to for several reasons. It is cheaper than honey, therefore it pays to extract entirely and feed sugar in the place. In order to build up fast, in the spring it is necessary that the colony should have an abundant store of provisions. But Mr. Preuss goes farther than that. He feeds early in the fall, so plenty of young bees are raised, and his colonies are at the opening of the season, strong in young bees and provisions.

By the use of this method, Mr. Preuss has obtained far greater yields of honey than by the ordinary management.

The only two points that can be considered new for the American readers, are the use of the consignator and the fall feeding, or rather the fall breeding of young bees. I cannot say much on the first point, but I can say something on the second. With me, the colonies that are strong in bees, or rather in young bees in the fall, are those that winter well, breed fast in the following spring, and give the big surplus. It may be a question of locality, and possibly of proper management. Many of our leading writers, Doolittle, Hutchinson, etc., advise letting down breeding during and after the honey flow and having in each colony, only the necessary number of bees to keep alive through the winter and then build up in the spring as fast as possible.

In a discussion on the question of large versus small brood nests that took place some two or three years ago, I asked them something like this: "Do you not lose more than you gain by discouraging brood rearing? You barely succeed in getting bees and brood enough to fill an eight-frame hive in time for the honey flow. Starting in the spring with a stronger colony, could you not just as well; and, in fact, more easily fill a Dadant hive (about 12 frames standard size) and have something like twice the number of field workers at the opening of the flow?"

To this, Hutchinson replied that the very strong colonies do not winter well in cellars. They get restless, raise brood, eat pollen, contract the dysentery, and come out in the spring in a bad fix, if they don't die out entirely.

Well, I didn't have much to say in reply, having no experience in cellar wintering. I suggested, however, that the temperature which was just right for the small colonies might be too high for the large ones, because the heat produced by the bees was added to that of the cellar, and since the large colonies produce more heat, the cellar ought to be kept colder in order to make compensation.

Knoxville, Tenn., May 20, 1902.

Bees and Nature Study.

(Bessie L. Putnam.)

THE WINTER vacation of the northern apairist, though one of enforced physical inactivity, may be a rich mental feast. The practical bee-keeper is, whether or not he himself realizes the fact, considerable of a naturalist. He can at once pick out a queen or queen cell; he knows just how many days after a swarm emerges before the second swarm may be expected; the pasturage, periods of greatest activity, methods of work, enemies, all these phases and many more are familiar to him. Yet if his observation ends with that which seems to promise pecuniary benefit, the greatest charm in bee-keeping is lost.

It is noteworthy that many passionately fond of honey could not be induced to keep bees because of their terror of the stings. On the other hand, some of the most enthusiastic and successful of bee-keepers on a small scale care little for the sweets but delight in working with the bees. Only those who have tested the enjoyment to be found in the various departments of nature's workshop can appreciate the genuine pleasure to be derived therefrom; and the more intimate the associations. the more thorough the enjoyment.

Bee-keeping presents a phase which, while one of the oldest industries in the history of man, still there is something unexpected at every turn. Apiarists are every day recording something new about the habits or methods of this most intelligent and most useful of insects; and still the half has never been told. Those who fail to add yearly to their own knowledge that of recognized authorities do themselves as well as their charges an irreparable damage.

Of course all progressive bee-keepers take and read regularly at least one reliable journal. Through this they are kept informed on the improved methods of handling, markets, etc. But during the winter every bee man should make it a point to carefully read, study, a standard work on the life history of the bee. There are numerous books on the subject at reasonable price. It will do one good to learn of the functions of the various members, even if such knowledge does not increase the honey flow. The experiments whereby the sense of smell was located in the antennae are most interesting. Prof. Cook heartily recommends a small lens in dissecting. and says of its results: "I would much rather that my boy should become interested in such study than to have him possessor of infinite gold rings, or even a huge gold watch with a tremendous charm. Let such recreation gain the attention of our boys. and they will ever contribute to our delight and not sadden us with anxiety and fear."

It is certain that a study of any part of the bee or its habits reveals unexpected pleasures. The narrow line between instinct and reason becomes uncertain. What colors do bees prefer? What power over them has odor, be it of flower or crushed bee? Under what conditions are they most liable to sting? What is the physiological result to the bee of stinging? These are but a few of the queries that will suggest themselves, and he who adds annually to his knowledge of bees and their habits is bound to become more observing, enthusiastic, and sympathetic. He becomes not only a better bee-keeper but a better citizen. Life is broader, more noble. A comprehension of the wondrous unity in the creation results in the more perfect development and enjoyment of its masterpiece, man.

Harmonsburg, Pa., Jan. 22, 1902.

Swarming Conditions—Long Tongues.

Misquoting the Markets.

(M. W. Shepherd.)

WHAT is the matter with Deacon Hardscrabble? There seems to be doubts in his mind as to the value of the advise put forth by some of the prominent teachers in beedom. He says "what a jolly lot of rot is printed about manipulation." Bro. H., it may not be so jolly, but it is rot, and no mistake.

Bro. Coggshall don't play such a foolish part in such a matter as to consult a set of rules about manipulating a hive of bees. Most bee-keepers know that hardly two colonies of bees in a yard will accept the same treatment in the same way. We were told in the American Bee Journal a few weeks ago that queen cells were always left by the retiring queen, and in about a week after the swarm had issued, the cells would begin to hatch. Perhaps that is the way, but if it is, then our bees made an awful mistake in the matter. We had 484 swarms issue, led by clipped queens; of course, the old queens were caught and returned, after we had cut out all queen cells, but we often found there was no cells started, so had none to cut out, but we did find that in 25 per cent of the swarms that came out, there were virgin queens with the bees, and the old queen safely back in her old home. As a matter of course, the bees with these virgin queens had to be carried back in a swarming box or basket; for as long as a virgin queen was with them, just so long they would stay out, and finally leave for good. I believe bees acting in this way do so in direct opposition to the teachings of Dr. Miller.

Has everybody all the long-tongue bees they need, and what queen breeder that has such queens for sale, will requeen our 1000 colonies, and guarantee their bees to be superior to the odds and ends we now have which have come from everywhere and nowhere in particular.

I have noticed this season that the bees doing the least, were those beautiful bees, and those colonies filling their supers were—well they had neither breeding nor manners, but honey, galore; and would sting you for pure love, (perhaps). Their tongues might have been longer than their stings.

Is it the proper thing for a dealer to quote prices two cents above the market and remit in final settlement two cents per pound below market prices. We have in mind 40 barrels of honey that was bought and paid for on such a basis. Yet the buyers furnish quotations for publication. We are lead to wonder if such dealers expect to have any part in the great hereafter. Am afraid they could not be trusted.

Hollister, Fla., June 14, 1902.

(If at any time our readers fail to receive honest treatment at the hands of those who quote the markets in these columns, they will confer a favor by advising us of the fact.—Editor.)

Giving Surplus Room.

(L. E. Kerr.)

PRODUCERS of extracted honey have only to give a lot of extra room when the honey flow comes on and then go and sit in the shady corner of the apiary and watch the bees work. The extracted honey man never worries over the amount to be added, whether one or five supers, only so there is enough; he has no swarming, in fact, none of the troubles which assail the comb honey man at every turn, in his troublesome career.

The comb-honey producer is very particular as to the amount of extra room given, and even then, perhaps, will fail to get the bees above. Many losses arise from this state of affairs, one of which is that the nice, clean super will be all colored up in a few days, when perhaps, the bees will go to work and store a few pounds of dark looking honey. Should they go to work at once they will produce nice honey, but they cannot work to any advantage if too much room has been given.

Why do we practice tiering up at all? Why not give all the supers at once and save work? The answer is plain, because caution is required to avoid the giving of too much room, or the bees cannot work to advantage. A certain condition of the atmosphere must be obtained around the bees before they can work to advantage, and this cannot be obtained when too much room is given. Let the man who would call these facts "theory," try giving three, four or five supers at a time and see how it works.

In tiering up, after the first super is getting pretty well filled, it is still more important to not give more room than the bees need. Still they must never be crowded. Most any one can learn to give room just as the bees require it if he is painstaking. Careless statements that have crept into the bee journals of late to the effect that the average bee-keeper does not give enough super room, has caused me to sound this little note of warning, and I only hope that some who might make such a blunder may be caused to pause and reflect.

Hurricane, Ark., June 10, 1902.

Transferring.

(E. H. Schaeffle.)

TO TRANSFER bees in midsummer I don't think a better method can be devised than to drum the bees into a box, set the new hive, filled with worker combs, of full sheets of foundation, on the old stand, place a queen excluding zinc on the new hive; over this place the old box, in three weeks' time slip a bee-escape board under the box and when the bees have all gone down, take the box off. It will then have nothing but the combs and what honey may be in the comb, no bees to mash, no brood to kill, and all the brood hatched out and added to the hives' army of workers.

This season I have had an unusual amount of transferring to do, from bees bought in. I wanted to do this work early and return the stores to the bees. As February with me finds the bees with light stores, few bees and but very little brood it is the right time.

Before starting I provided myself with a transferring kit. This consists of a bee brush, smoker, long bladed carving knife, vineyard pruning knife blade eight inches long, set in the handle, and temper down sufficiently to permit of prying off one side of a box without snapping the stout blade. A transferring knife made out of the half of a buck-saw blade, two inches wide and 12 inches long, ground sharp on one edge and across the two inch end, a hive filled with empty combs and a stand to work on.

The bees were smoked and the hive or box to be operated on, placed on the table and the hive, with the empty combs, placed on the stand formerly occupied by the bees. Next the box was opened at its weakest part. If the top was started, the blade of the transferring knife was slipped in and shoved across, chiseling off the combs, if the top was there to stay, then the box was turned over and the blade of the knife sent down all around the inside of the box, severing the combs from the sides. Next a side was taken off and the combs removed, the bees shaken and brushed onto the empty combs in the hive, on the old stand, the combs removed were placed in a roomy box. When the combs had all been removed and the bees brushed off, the old box was looked over carefully to make sure that the queen was not hiding on it; then the combs were taken to the honey house, and with a hot knife fitted into frames, sufficient frames, filled with worker combs, then added to fill a hive. This hive was taken to the old stand and placed under the hive with the empty combs. In about two hours' time the bees were nearly all down and the bees remaining were brushed off the combs and the bees left with the hive containing their old combs and stores.

I found that where the hive was left on over night the bees would carry the honey from the leaking combs up stairs into the empty combs. As I wanted all the stores with the bees, I found it necessary to remove the empty combs before the bees got started to transferring.

Where the transferring is to be done from hives, it is an easy matter to turn the hive over, cut the combs loose on all sides and then slip the hive up over the combs and leave them all exposed. In fitting in combs that have brood, it is necessary to have a cushion to lay the comb on, otherwise the brood will be crushed.

Murphy, Cal., Feb. 28, 1902.

A Sensation in Jersey.

(M. F. Reeve.)

SOME fearful and wonderful bee stories get into the newspapers. A correspondent who sent a dispatch to the Philadelphia North American from Millville, N. J., giving an account of a "bee farm" down there owned by M. E. Chance, who has "13 hives at work, and all are in first-class shape" goes on to say:

"It is often said that bees cannot be taken from one hive to another unless they swarm. This year Mr. Chance intends trying an experiment in a closed room and attempt to get the bees from the old hives into the new ones."

Wonderful! Veteran bee-keepers will all hope he may succeed in this daring venture. But why go indoors when he might have done it just as well in the open? Hear this concluding sentence:

"On a clear day the bees sometimes go as far as ten miles from home, often flying home in the evening with their legs full of the sweet luxury."

"Legs full of the sweet luxury" is good. How about a "ten mile fly" also. Those must be long-distance stock. The next thing, everybody will be crossing them on "long-tongue" bees, and improving the breed. The news editor headed the item:

BEE FARM THRIVES IN JERSEY TOWN

Millville Man Has an Industry That Plucks Money From the Flowers.

Rutledge, Pa., June 15, 1902.

"If that severe doom of Synesius be true—'It is a greater offence to steal dead men's labor than their clothes,' what shall become of most writers?"—Burton.

APATHUS AND THE BUMBLEBEE.

Oh! an Apathus sat on a Chrysanthemum
A-cleaning her antennae
And she little thought of the Pyrethrum
That would take her life away.

And there she sat, a-taking a rest,
And smiled in a satisfied way
For she'd laid ten eggs in a Bombus nest
And there'd soon be the de'il to pay.

For her offspring dear, her very first brood,
Would hatch in a very short time,
And no trouble she'd have a storing up food,
For she worked on the Cuckoo line.

Her young would hatch ere the young Bumblebees,
And the young Bumblebees would die,
When the young Apthi would live at their ease
And fatten like pigs in a sty!

So she sat in the sun, this wicked old bee,
And scratched her tibiae,
And chuckled inside in lazy glee.
At the business she'd done that day.

* * * *

But the Chrysanthemum on which she sat
Belonged to a neat old maid,
Whose plants were her pride (next to her cat)
And that day she was out on a raid.

Against Aphids and slugs, with a Buhach-gun,
Filled Peters & Milco's best,
And seeing the Apthus, just for fun,
She dusted her yellow vest.

How the cheat kicked as she fell on the groun!
And how she did buzz and hum!
But she never got well—she never "came round,"
Her fraudulent life was done.

* * * *

From this little tale can a moral be drawn—
How the Bumblebee loafs not a bit;
But works all day from the earliest dawn,
And thus 'scapes the death dealing hit?

This moral is good, but please don't forget
Those eggs that the Apthus hid!
The Bombus is working and slaving yet,
But it's all for the other one's kid!

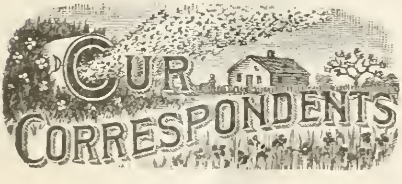
—L. O. Howard in "The Insect Book."

THE ANARCHISTIC WASP AND THE BEES.

A wasp, admitted to a hive
Of bees, and managing to thrive
Upon their industry by sipping
The honey from the comb a-dripping,
Resolved that he would kill the queen.
"So vile a tyrant ne'er was seen,"
He said. "And see those idle drones—
Each villain of them thinks he owns
The hive and everything that's in it.
If wax were flint the rogues would skin it!
They are a product of a law
That I do not assist to draw.
Laws, drones and queens—abolish these
And we'll be happy, happy bees!"
So with a patriotic pride
He stung the queen until she died.
The workers, and the drones as well,
In righteous rage upon him fell
And sealed him in a vacant cell,
Then held a council to determine
The fittest fate for such vile vermin.
One said "starvation," and another
Declared 'twere best the wretch to smother;
And some proposed to skin his mother.
In brief, there were a thousand laws
Drawn up, and each evoked applause—
As many plans as bees that knew
Not what (nor clearly whom) to do.
Then rose a wise and aged bee.
"My friends, I pray you pause," said he,
"And well consider whether any
Of us—and we are very many—
Merits the satisfaction all
Would get from harming him at all.
It seems to me 'tis rather late
To do a service to the state
By laying hands upon this bummer;
We've known he was a wasp all summer."

That set them thinking, and they passed
A law that gave them peace at last.
'Twas made a capital offence
To be a wasp. The moral thence
Draw for yourself; enough for me
If man will ever learn from Bee.
—Ambrose Bierce.

A MIGRATORY APIARY ON INDIAN RIVER.



OUR CORRESPONDENTS

Grafton, Mass., June 10, 1902.

Editor American Bee-Keeper:

I have never seen anything in The American Bee-Keeper from the pen of a Massachusetts bee-keeper, and as I am interested in the subject, I thought I would just let our southern and western bee friends know that we can keep bees in Massachusetts.

Much has been written about keeping bees in box hives, but we have no use for them here in Massachusetts, only as relics of the past, to show our children and grandchildren how bees were kept in the nineteenth century; just as we keep our old spinning-wheel, tallow candle and other things of the past. But I cannot conceive of any one of the twentieth century keeping bees in these "ideal palaces."

As for queen-excluders, I agree with Dr. Miller—we never have used one, nor have we had occasion to. Keeping bees in New England is different from keeping them in almost any other part of the United States. We have never been troubled with foul brood; but our winters are long and cold and bees often come out in spring much reduced in numbers.

Our honey season is short and we haven't such large numbers of honey producing plants as our southern and western bee-keepers; but we get far better prices for our product. Fifty pounds surplus is a good summer's work for a colony, and we are satisfied with the profit.

Yours truly,

E. P. Goddard,

Pres. Worcester Co. Bee-Keepers Association.

THE
SEASONING
SERIES
MANY THINGS
BY SEASONINGS
SEASONED ARE
DEACON HARDSCRABBLE

Dear Bro. Hill:—

What do you think of a chump who hives a swarm of bees by putting bees, branch, leaves and all, right into the hive and leaving them there?· That's what one of the boys found had been done when he tried recently to transfer a colony from a box hive.

Have you tried one of the new Buncomb Brass Smokers? Most wonderful sort of brass; more of it in the manufacturer than in the smoker, which is half tin. And you should see some of the wonderful rivets in it, with soldered ends. They stay put almost long enough for you to light the smoker.

The results of trying to use one 'minds me of some of the fine gentle queens some of the boys are sending out. Their bees got after one of my black boys t'other day. When he got cooled down a bit he said: "Mars John, whar yo' get dem yaller debbils?" I told him. "Dat man is shore gettin' ready for de hot place."

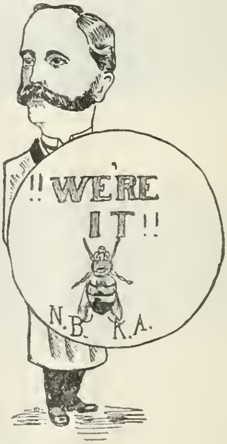
Our genial general manager knows how to make things hot, too. If you want to prove it, just go to printing something inimical to the best good of beedom.

He is already after some of the boys and first thing they know they'll be punctured by that virile pen and will have a most awful pneumatic tired feeling.

Did you mind the self-complacency with which the Review's editor quoted my remarks about bee papers which mixed other topics with their bee lore? Has he forgotten his free ad of some "Yellow Zones" and some other similar slips?

In the A. B. J., May 22, a chap in South Dakota (if you want to know what part you'll have to ask York) writes of mixing sweet clover honey with "shoe-strings, snowdrops, etc." There is no accounting for tastes.

What do you think of Hutchinson's idea of wearing a bill board on our coats announcing that we are bee cranks? Great, Isn't it?



I notice Carniolan queens are being advertised by several persons. Certainly, of course, just as was to be expected. The Italian boom is about over. Color, gentleness, long tongues, have all been exploited, and now it must needs be a new race. Next.

Yours as ever,
John Hardscrabble.

THE
Bee-Keeping World

AUSTRALIA.

Bees are very successfully and profitably kept in Australia as is well known. Of late years a new enemy, a beetle, Thillotochus Macleayi, has been discovered troubling the bees. Formerly this beetle secured his sustainance from certain nectar-secreting blossoms, but the Entomologist, Fraggelt, has observed that for two years past it has found an easier way to secure his living. He enters the hives and takes the honey from the comb. The insects make their raids after sunset and during the night, sometimes in large numbers. One bee-keeper, in Rumpong Cooma, caught in one night seven liter full of the robbers by trapping them in dishes filled with honey water placed at the entrance of his hives. (Bienenvater.)

AUSTRIA.

It is proposed to have an international exhibition of bees, hives, implements, etc., during 1903 in Vienna. It is hoped that bee-keeping, as it is carried on in different countries may be shown there. The exhibit is to be divided into six classes as follows: 1. Live bees. 2. Hives. 3. Implements. 4. Products. 5. Artificial products. 6. Literature.

ALGERIA.

This country is reported in the Leipziger Bienenzeitung as having 24.776 bee-keepers, with 229.143 colonies of bees.

GERMANY.

It is recommended quite often by German authorities to gather up chilled bees on cool and windy days, warm them and give them back to the colonies. Mulot tells of gathering on Dec. 31, 1901 and Jan. 1, 1902, about 15,000 or 20,000 bees which were unable to regain their hives on those two days. After some calculating and figuring he finds he has saved each of his colonies about 250 bees. His conclusion is, that the worth of this saving is out of proportion to the labor required.

When one has become accustomed to a certain kind of hive, be it a German cupboard-fashioned hive, a Gravenhorst Bogenstuelper or an American open-at-the-top hive, he is apt to underestimate others, because in his awkwardness and prejudice he cannot easily manipulate them.—Matthes, in Deutscher Bienenfreund.

Ebstern has arrived at the conclusion that colonies standing in intense shade, store more honey than those not so shaded.

It is recommended in Deutscher Bienenfrund to apply honey in case of scalds or burns.

Guehler, of Berlin, believes the confidence of the honey consuming public could be gained by the bee-keepers adopting a special and uniform package and a properly devised label. Such a course would prove beneficial in America as well. The name and address of the producer should always be on all packages, even on section honey.

Editor Reidenbach (Thaelzer Bienenzeitung) favors increase by natural swarming. Queens reared under the swarming impulse he finds superior. He has observed that such queens often weigh as high as 300 milligram. Queens reared under forced methods from larvae never attaining a weight above 245 milligram.

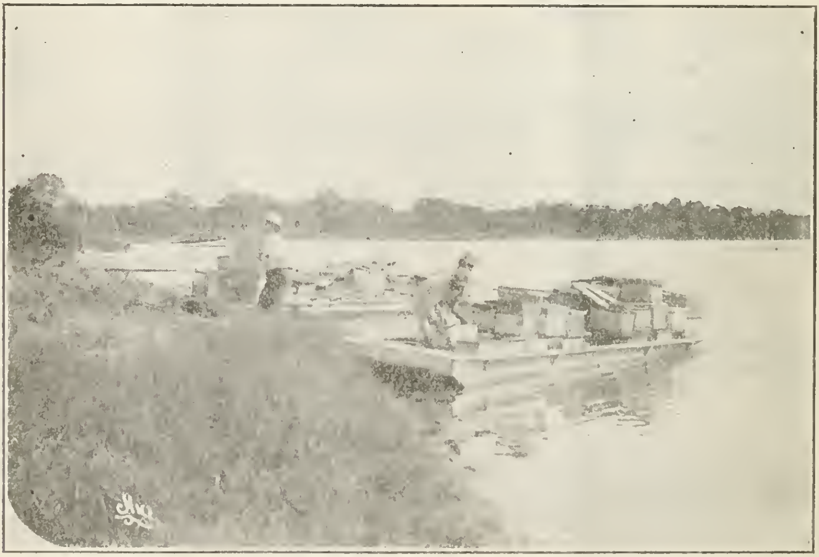
Relative to the use of comb foundation the Phaelzer B. Z. says this: During the first two weeks, young swarms build only worker comb, and a swarm weighing two kilogram will fill about five frames full of such comb during this period. After this time the use of foundation is advantageous. Old colonies should never be allowed to build comb in the broodnest without comb foundation.

Goeken gives the following good hints about introducing queen bees: Mailing-cages are not suitable for introducing. They have a peculiar odor which is slow to leave and in a measure prevents the new queen from taking the odor of the colony. A cage admitting of confining the queen upon a comb is the safest. A queen confined in this manner is more quiet—is in closer contact with the bees. She is depending upon the bees of the hive for being fed, and is fed. She will thus take on the hive odor in the shortest time and be accepted.

Mulot says he has entertained the hopes for years, that the numerous little bee-papers in Germany might be consolidated into one great weekly journal to which all noted bee-keepers might contribute. Such a journal would necessarily cost more than any one now printed, but after all a good deal less than the many printed now. He finds it impossible to read all the journals, even if he felt disposed to pay for them; the one large paper he could master. I have often thought just so about our American bee-keepers, but I am afraid that the obstacles are too great to be surmounted and to meet the idea of Mulot. For instance: who is to say what shall go into the journal and what not? The manager or editor would have to be a most wise and absolutely unbiased man, such as cannot be found any where. Some things would be suppressed that should be published, other would be published that should be suppressed. Considering the matter from all sides, I believe it is best to have several journals in a country.

It is a common practice among Germany's bee-keepers to feed the young swarms for a week or two after hiving. In this locality, (N. Y. state) May swarms often need feeding to keep them from starving, but June and July swarms nearly always do well without feeding and store surplus besides. May swarms are undesirable with me.

F. Greiner.



MOVING BEES TO THE MANGROVE. (*See Editorials.*)

SECCIÓN ESPAÑOLA.

"The American Bee-Keeper" se envia á principio de cada mes. Si por algun motivo el suscritor no recibe su periodico á su debido tiempo, sirvase notificarnos y les enviaremos otro ejemplar.

Todo asunto relacionado con la Dirección y subscripción á este periodico, debe enviarse á "The American Bee-Keeper, Fort Pierce, Florida. El dinero puede remitirse por giro postal. El giro puede hacerse á The W. T. Falconer Manufacturing Co., en Jamestown, N. Y., cuando convenga más á los marchantes de esa casa

Cuando el suscritor reciba el periodico con una faja azul es para avisarle que su subscripción termina con ese ejemplar. Esperamos ser favorecidos con orden para continuar la subscripción. Rogamos á nuestros corresponsales escriban los nombres y direcciones bien claro para evitar demoras.

Una faja roja indica que se debe la subscripción y esperamos su pronta atención al particular.

Subscripcion: 50 centavos al año.

MISTERIOS DE LA COLMENA

Guia del Apicultor Cubano.
por el
DR. JUAN B. PONS Y FONOLL
y anotada por el
DR. GONZALO G. VIETA.
(Continua.)

Se cree que el sentido del olfato reside en las antenas y, segun Latreille y Newport, tambien contienen los órganos del oido. Cheshire apoya este aserto, aunque no lo prueba y sin embargo, todos los insectos tienen conciencia de los sonidos ó mejor dicho, de las vibraciones, las cuales causan los sonidos. Esto es evidente, y todo apicultor concienzudo, puede observar el efecto producido en las abejas por el zumbido emitido por sus compañeras de colmena, y cuan contagiosa es la estridente nota de ira, asi como el bajo sonido de temor, distintos completamente del alegre zumbido de un enjambre al salir de la colmena, en busca de nueva localidad.

Hay pues razón para creer, que éste delicado órgano tactil, puede hacerles distinguir perfectamente las vibraciones, aun mas sensibles que podamos hacerlos nosotros con nuestros oidos, y si éstos insectos, pueden apreciar con gran delicadeza las diferentes condiciones vibratorias del aire, por un excesivo desarrollo del órgano del tacto, indudablemente que las antenas, pueden ser los mejores órganos de trasmision, pues, hasta el presente, no se ha encontrado otro órgano cuya estructura demuestre el sentido del oido.

Cheshire considera, que las pequeñas cavidades que se encuentran en mayor nùmero en la punta de la antena, cuya ûltima articulacion contiene cerca de veinte, constituyen el órgano del oido, sobre todo, por que estas cavidades son mayores en las antenas de los machos, que son lo que mas necesitan de este sentido, para distinguir el vuelo de las Reinas.

Las cavidades del olfato (colocadas entre los pelos que cubren la antena), estan formadas de una película muy delgada extendida en forma de vaso cerrado por el cual pasa un nervio, terminado por una célula. Estas cavidades en forma oval no pueden, en manera alguna, servir al tacto á causa de su depresíon y sí sirven, ciertamente al olfato como se ha demostrado por el siguiente hecho: Si se presenta un poco de miel á una abeja, las puntas de sus antenas se acercan alternativamente ántes que alargar su lengua. Si el alimento contiene alguna sustancia de olor desagradable, la abeja retira las antenas inmediatamente; pero si la substancia no tiene olor, como el sublimado corosivo, por ejemplo, la antena no descubre su presencia, pero la lengua sufre inmediatamente, lo que se nota por la retirada sùbita de la abeja y por los esfuerzos que hace, para desembarazarse de la causa de su sufrimiento.

Fig. 9.

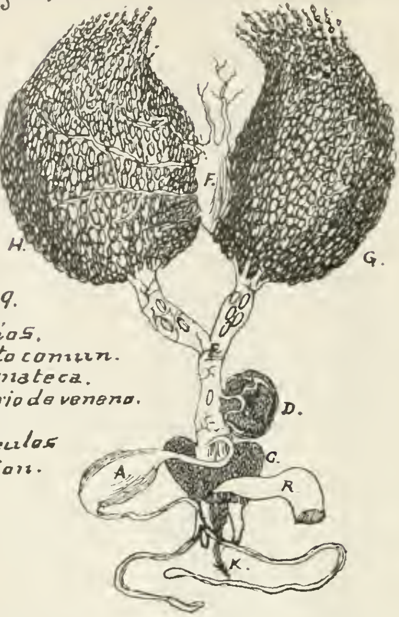


Fig. 9.
H. G. ovarios.
E. oviducto comun.
D. espermateca.
A. reservorio de veneno.
R. recto.
C. musculos
K. aguijon.

Comparando las antenas de los tres séxos, observamos que el *flagelum*, que es la parte sensitiva de la antena, presenta, en cuanto á su superficie, la proporción siguiente en los tres casos: la Reina uno, la Obrera dos y el Zángano tres. Sin embargo, el macho, no tiene mas que dos mil pelos tactiles, es decir, un sexto ó un octavo del número que posee la Obrera. Pero cuanto á las cavidades del olfato, las obreras tienen, en las ocho articulaciones movibles, un promedio de quince hileras de veinte cavidades cada una, ó sea, dos mil cuatrocientas en cada antena. La Reina posee menos nûmero, cerca de 1600 en cada antena. La razón de esta diferencia, es obvia, puesto que la Obrera tiene necesidad de sentir los olores del néctar.

En las antenas del macho tenemos trece articulaciones, cuyos nervios forman especialmente el *flagelum*, y están completamente cubiertos por las cavidades del olfato y cada cavidad es, mas pequeña que las de la Reina y la Obrera.

Un promedio de 30 hileras de estas cavidades, tiene 70 en cada hilera sobre cada una de las nueves articulaciones de cada antena, dando el increible número de 37,800 órganos distintos. (Cheshire.)

Nadie puede dudar que las abejas están dotadas de una maravillosa facultad de descubrir el olor de la miel en las flores ó donde quiera, y que en su vuelo se guian por el olor de la miel ó néctar de las flores, aunque estén á dos kilometros de distancia.

Además, no solamente tienen un olfato extremadamente fino y delicado, si que tambien, unen á esta ventaja la memoria de las sensaciones.

A Huber se debe el siguiente experimento que prueba de sobra esta facultad de la abeja. En otoño colocó un poco de miel en una ventana; las abejas acudieron enseguida en gran monton. Se quitó la miel y se cerró la ventana que permaneció asi todo el invierno. La primavera siguiente, cuando abrieron de nuevo la ventana, las abejas acudieron por mas que no habia miel y sin duda, se acordaron que la habia habido ántes.

Si se alimenta una colmena á una hora fija durante dos dias seguidos y en un mismo lugar se les coloca el alimento, las abejas se acuerdan y esperaran el tercer dia, á la misma, hora y en el mismo lugar.

La amputación de una sola de las antenas de la Reina, no ofrece ningun cambio en su conducta, pero si se cortan las dos antenas cerca de sus raices, se nota que estos séres privilegiados pierden toda su influencia, el instinto de la maternidad desaparece, y en lugar de depositar los huevos en las celdas, los dejan caer por donde quiera.

Las obreras privadas de sus antenas vuelven á la colmena y alli permanecen inactivas y completamente inútiles para el trabajo.

Asi mismo los machos desertan y se pierden.

Los ojos son de dos clases; los ojos *compuestos* y los *oceli*, (ojos simples.)

Los ojos *compuestos*, son un conjunto de ojos simples aglomerados y en forma exagonal. La córnea es trasparente y precisamente por cada faceta, correponde una lente del cristalino, desde el cual se estiende hacia atrás una varilla, formada de unidos hilos quitinosos. Cada varilla está rodeada por ocho columnitas redondeadas—*retinula*—las cuales estan cerradas por membranas de pigmento.

En la base de los *bastoncitos*, se reunen los hacecillos nerviosos de la terminación de los grandes nervios ópticos, los que se estienden desde el cérebro, y

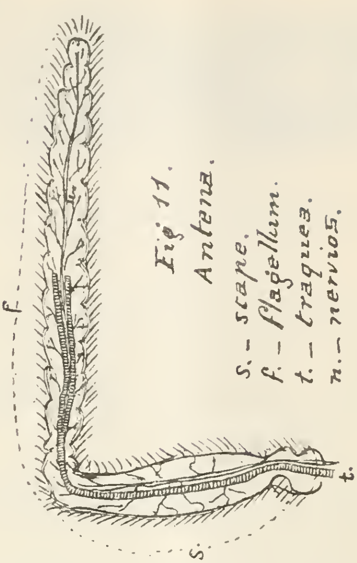


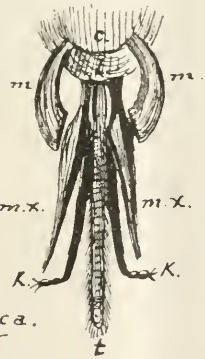
Fig 11. Antena.

S.- scape.
f.- flagellum.
t.- traquea.
n.- nervios.

ántes de llegar al ojo forman un abultamiento ganglionar.

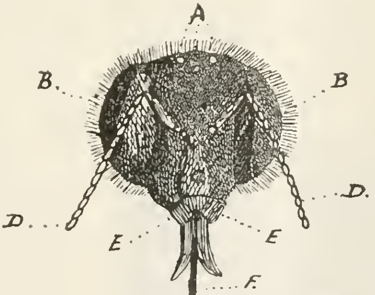
El color depende del pigmento, y la forma, tamaño y posicion de los ojos, varia mucho, como puede notarse la diferencia que existe, entre los ojos de los zánganos y los de la obrera y Reina.

Continuará.



Boca.

c. clipeus.
l. labrum.
m. mandibula.
m.x. maxilas
K. palpos labiales.
t. ligula.



Cabeza de reina. Fig. 10.

A. ocelos, ojos simples.
B. ojos compuestos.
D. Antenas.
E. mandibulas.
F. lengua ó ligula.
C. Clipeus.

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Editorial

The picture, "A Migratory Apiary on Indian River," shown in this number, is situated on the islands opposite Ft. Pierce, and shows our prosperous little town in the dim distance, on the mainland.

As it now appears, 1902 will not be referred to in the future as "the year of the big honey crop."

Of the 707,261 bee-keepers in the United States, it is safe to say that 95 per cent do not take a bee paper.

Mr. W. H. Pridgen, the noted queen breeder of North Carolina, is engaged in wrting a new book on the subject.

Mr. Adrian Getaz, of Knoxville, Tenn., in Gleanings, estimates the annual consumption of honey per colony at 200 pounds. This is a question yet undecided, and one very difficult to determine; but, for the South, we are inclined to regret Mr. Getaz's estimate as more nearly correct than any we have seen heretofore.

A revised, and very handsome edition of "Advanced Bee-Culture" has been issued by the author, Mr. W. Z. Hutchinson, Flint, Mich., to whom we are indebted for a copy of the work. The field of practical bee-keeping is concisely covered, in thirty-two chapters of well-printed text interspersed with colored plates. The price is the same as for the first edition—fifty cents.

That honey in plain sections sells more readily and at higher prices, than that in the standard bee-way style, is discredited by F. L. Thompson, in the Progressive Bee-Keeper. According to Mr. Thompson's expressed opinion there is nothing in the "superior finish" idea to justify the bee-keeper in making any expensive change from the bee-way to the plain style of section.

"Bees," is the name of a new exchange recently added to our list. It is a very readable monthly, edited by Edward A. Geary, Oxford Road, Upper Norwood, London, England. "Bees" has one bad habit—a habit quite prevalent with European journals—i. e., the habit of leaving its home before it has been stitched, thus permitting its leaves to fall apart in the hands of the reader.

A private letter from our old friend, M. W. Shepherd, who has been operating for some time on the west coast of Florida, states that he is again at home, after having experienced a fair season with the bees on the Apalachicola river. Mr. S. advises us that as a result of the season's operations they now have to their credit 150 barrels of extracted, and 20,000 pounds of comb honey. We believe the apiaries producing this crop include about 900 colonies.

In response to our request for information as to the proper pronunciation of the word, "super," Dr. Miller, in Gleanings, explains that the "u" in "super" has precisely the same sound as in "cue," "bugle," "fury," "pure," etc.; and the editor of Gleanings concurs. This being the case, it appears that hereafter a word which comes mighty near being "sooper" will have to be substituted for "supper" in the vocabulary of some who speak as if by authority.

This is one of Dr. Miller's Stary Straws in Gleanings: " 'As for robbers, since our bees are all Italians we have almost forgotten there are any, and scarcely take any precaution at all, now.' That's what A. I. Root said in American Bee Journal, 1870, page 259. It's just as true now." The Doctor promised us some years ago to label his jokes in the future, and as this appears without the label, we are led to wonder if he was serious in making the observation. For persistent robbing propensities we have had to do with pure Italians which we should not hesitate to match against the world.

In The Bee-Keeper for February, Mr. W. W. McNeal took bee-keepers to task for their untidy, careless and uncleanly methods in handling and preparing for market their crops of extracted honey. Mr. McNeal's charges have elicited some criticism of a sarcastic trend upon the part of an exchange. Mr. McNeal's critic thinks any nastiness on the part of bee-keepers in this line should be detected and complained of by the consumer, and not by another bee-keeper; and further, that he knows of none among us at this day and age who does not take every precaution to put nothing but the best before the public. Mr. McNeal's article would certainly lead one to believe that he has encountered an extraordinary case of nastiness or ignorance. That carelessness is the rule rather than the exception, we doubt. Our observations in this particular line have not been limited to a few instances. It has been our privilege to witness the methods in various parts of this and adjoining countries; and we believe that the honey producing specialists as a class, exercise the utmost care and cleanliness in handling their product. When reading Mr. McNeal's copy, however, we were occasionally reminded, by his remarks, of corresponding instances which we ourself had met. No, Mr. McNeal's picture was not overdrawn—it fell away short of a faithful portrayal of careless, ignorant handling of honey which we had seen. We do not wonder at Mr. McNeal's "ugh!" We refrain, however, from elaborating upon the proposition—it's not pleasant. It is a shame to the perpetrators and an injustice to the fraternity; a truth, nevertheless. That carelessness and ignorance among us is on the increase, as might be inferred, is quite improbable. That it should be so among the readers of our apicultural literature, is incredible; for it must be known that the handling of such a delicate commodity as honey demands scrupulous cleanliness, and that a disregard of this demand must result disasterously to the industry upon which we depend for a livelihood. The incomparable delicacy of pure honey, its delicious flavor and appetizing aroma are the very foundation walls of our industry; hence the importance of their preservation. We offer no apology for referring to the matter in these columns. We believe the evils as well as the commendable things should be treated, and treated thoroughly, through the medium of the trade journals. By what other means are existing evils to be brought to the attention of those upon whom the success of the business depends—the bee-keepers themselves. Are we here only to pat upon the back those whose operations or expressions accord with our personal ideas, and to turn our backs upon menacing tactics which promise ruin to the industry in the interests of which we were born, just because the offender masks as an apiarist? It is due the interests of our art that a greater altitude and a broader view be sought. We sympathize with Mr. McNeal, and enjoin upon our younger readers the absolute necessity for a system of careful attention to this matter—studied determination to so prepare their honey as not to degrade, but to elevate our product upon markets of the world.

OUR PICTURES.

Last month we referred to a new bee-keeper who recently set in to cut a swath of extraordinary width down the Florida coast and through the apicultural field of Cuba and other islands of the sea. The keen edge of his blade appears not to have been blunted at all by the discovery, on June 4th, that 16 of his nuclei had departed this life, as a result of inadequate forage and no stores. This is experience No. 1 in the long list awaiting one who discounts, it not wholly ignores by habit, the practical experience of the veterans but assumes to justify his theories by figures and fancy.

We show in this number of The Bee-Keeper a view of the new man's transports and hustling assistants hurriedly planting apiaries upon the over-stocked shores of Indian river. We do not assert that all localities on the river are over-stocked with bees; but the immediate vicinity of the scenes depicted were fully stocked prior to his arrival, hence the loss which must of necessity result, not only to himself, but also to those whose prior occupation should be respected.

During the leisure time usually at the disposal of a bee-keeper in an over-stocked locality, the gentleman lays his plans for the move to Cuba with his 800 colonies this fall, argues with himself or others on the absurdity of the statement that the surplus season in Cuba is confined to a few brief months in the winter, and strives to glean from his "Diccionario de Bolsillo" (pocket dictionary) the necessary Spanish words to start with in the land of his future hope and endeavor, accross the Straits of Florida.

The gentleman appears quite familiar with the apicultural situation on the Pacific coast, and advises us that he will be in close touch with that country during his Cuban sojourn, and that in the event of 15 inches of rainfall in the southern counties of California next winter, he will make a bee-line for that country, and there establish other apiaries.

Our readers will, therefore, note that strict vigilance is necessary in order to keep this migratory fellow in sight; but we have undertaken to do so, for the benefit of our readers who admire apicultural enthusiasm.

COOK'S MANUAL OF THE APIARY.

For nearly twenty years this work has occupied a high place among the standard books on apiculture, and the author has for many months been laboriously engaged upon a new and thoroughly revised edition, which is now out. We have not yet had the opportunity to review a copy of the 1902 edition, just received from the publishers, Messrs. Geo. W. York & Co., Chicago; but Prof. Cook's established reputation for painstaking and thoroughness in his literary work are a sufficient guarantee of the feast in store. It is a volume of 543 pages, beautifully printed, profusely illustrated and handsomely bound—a work creditable to the makers as well as the author.

We are in receipt of a neat little booklet entitled, "Foul Brood," issued by the Colorado Bee-Keepers' Association, for Colorado bee-keepers. Aside from the full text of the law relating to foul brood, approved April, 6,1901, in that state, the disease is concisely treated under three headings—The Disease, The Symptoms, The Cure. It contains also the specific rules for the grading of comb honey adopted by the Association, of which J. U. Harris, Grand Junction, is president; The other officers are: Vice-President, M. A. Gill, Longmont, D. W. Working, Denver; Treasurer, Mrs. R. A. Rhodes, Ft. Lupton; Member Ex. Committee, F. Rauchfuss, Denver.

The following notice received at this office explains it self:

EUGENE SECOR STILL GENERAL MANAGER OF THE NATIONAL BEE KEEPERS' ASSOCIATION

Some little time ago it was announced that Mr. Eugene Secor, General Manager of the National Bee-keepers' Association, had sent in his resignation, and that the Board of Directors had selected E. T. Abbot, of St. Joseph, Mo., to fill out his unexpired term. But the Board, in reviewing its work, after a great deal of writing back and forth, during which valuable time has been lost, finally discovered that Mr. Secor's resignation was never formally accepted; that the procedure was irregular and out of order by which Mr. Abbot was supposed to be elected. Some complications having arisen, it was decided by the Board not to accept Mr. Secor's resignation, and to request him to fill out the unexpired time, or till the next general election. To this, Mr. Secor has agreed. All dues and membership fees, hereafter, should be sent, as before, to Mr. Eugene Secor, Forest City, Ia., who is still the General Manager, and will continue to be such till his successor is elected and qualified.

E. R. Root,
Acting Chairman of Board of Directors.

MR. SWINK AT THE TOP.

The following extract from a letter sent out by the press bureau of the Louisiana Purchase Exposition management, is quoted from a speech of Mr. Van E. Rouse, Colorado Springs, Col., before the World's Fair commission at St. Louis, where the big show is to be held in 1904:

"The World's Fair management in their plan and scope of the Exposition declared they wanted live exhibits, so in casting about for plans to make our exhibit conform to that idea we interested one of our wealthiest and most public spirited citizens, Mayor Swink of Rocky Ford. Mr. Swink is an apiarist, and he has, perhaps, the largest bee plant in America. He is going to bring his bees to the World's Fair, and they will work here from the time the Exposition opens until it closes. Mr. Swink's plan, which will cost fully $10,000 of his own money, is to bring to St. Louis enough beehives to construct in minature a counterpart of the Colorado State House at Denver. The bees will then be turned out to find material for honey-making in the country surounding the World's Fair grounds. It will require about 640 hives to construct the little State House and in it about five and one-half million bees will work. It will be a great exhibit. In Colorado we make the finest in the world. We have one bee man who works his bees all the year through. In summer they work in his alfalfa fields in Colorado, and in the fall he ships them to his plantation in Florida, where they work among the flowers and orange groves until time to return them to the west in the spring."

FROM DELAWARE.

The following, clipped from The Times, Smyrna, Del., for May 28, 1902, was sent us by a Philadelphia reader, and gives a pleasant glimpse of the situation about the apiary of an old Bee-Keeper subscriber. It would afford us much pleasure to receive photographs of the many neat and attractive apiaries of our readers, such as Mr. Smith's evidently is:

One of the largest apiaries on the Peninsula is situated at Willow Grove, and is the property of former Sheriff J. Colby Smith. There are about seventy-five colonies of the bees, which are arranged in rows and numbered. Mr. Smith has laid out a good-sized park, but instead of the green sward, he has cleared the ground and it is entirely bare of the grass. Rose bushes of fine varieties adorn this park, and in the centre is a small lake from which the bees get water. As many as six swarms may be seen daily on this bee farm of Mr. Smith, flying in the air. The bees are fed principally on scarlet clover, now. Mr. Smith has just finished clipping the queen bees' wings, preventing them from flying away, and thus losing the swarm. Sheriff Smith expects to have at least two tons of honey this summer.

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He that expecteth nothing generally gets it.—Max O'Rell.

HONEY AND BEESWAX MARKET.

The honey market is in a waiting attitude. there is more comb on sale than for several Junes of recent years; most of it is out of condition from one cause and another. chiefly by having grained: therefore a light yield this year would not help the crop on hand of last. Prices are without special change in either comb or extracted honey from those given in your last issue. Consumers are not in the market for other than small quantities. Beeswax is very scarce and brings 32 cents upon arrival. R. A. Burnett & Co.

Kansas City. Mo., June 11.—The old crop is well cleaned up. and with the low prices prevailing demand has been very good for past 60 days. We quote: Comb honey, 10 to 12 1-2 cents. Extracted, 5 to 6 1-2 cents. Beeswax is in good demand, with supply light. at 30 cents per pound.

Hamblin & Sappington.

Buffalo, N. Y., June 11.—Fancy comb honey, 13 to 14 cents. Other grades, 8 to 13 cents. Too early now to ship new crop. Wait until September or October. Batterson & Co.

Boston, Mass., June 10.—Stocks are being rapidly depleted and prices are nominal; but will range about the same as our last quotations.

Blake, Scott & Lee.

Tenemos una lista completa de los apicultores de la Provincia de Santa Clara, pero quisieramos poseer los nombres de todos los apicultores de Cuba. A todo aquel que nos envié una lista de diez apicultores, fuera de la Provincia de Santa Clara, mandaremos el American Bee-Keeper un año entero gratis. tf

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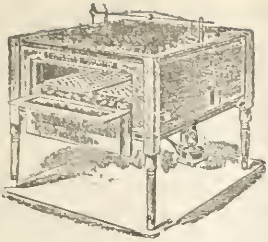

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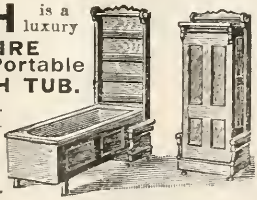

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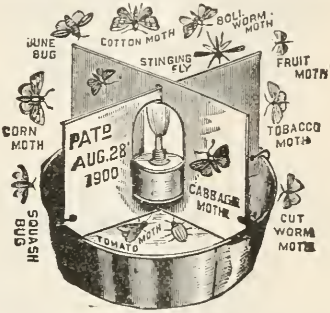

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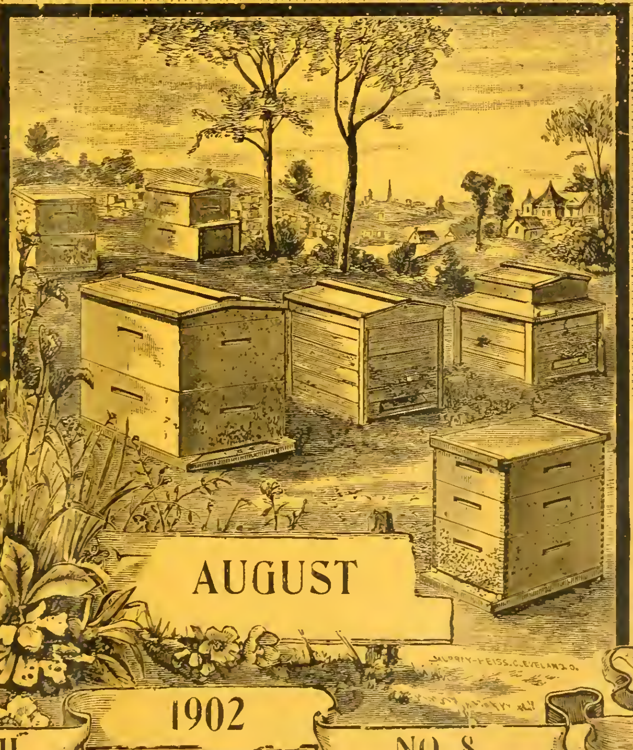
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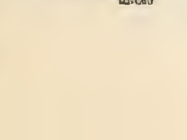

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THE AMERICAN BEE-KEEPER

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THE QUEEN.

Rules To Be Observed in Her Selection—Introduction, Clipping, Etc.

(Arthur C. Miller.)

THE QUEEN, the center of the bee universe offers the most fascinating field for study to be found in all apiculture. Notwithstanding the volumes that have been written on the subject, it is comparatively a virgin soil. To the beginner the queen is an almost mythical creature, and when found is to be gazed upon with awe and reverence. Truly she is wonderful and the better she is known the more wonderful she will become, and as the traits and habits are learned the field broadens and queen rearing becomes the chief part of bee-keeping, at least to the amateur.

As size, color and shape of queens naturally first engage the attention it may perhaps be best to first consider those factors. Size is the most deceptive of all attributes; the large queen today is small next week and even insignificant at some seasons. The large bright "Virgin" becomes a "Whopper" as she begins to lay. only to shrink to normal soon after. It is somewhat the same with color; at one time a queen looks bright, at another time much darker. These variations are seemingly great because we judge of a queen almost solely by the color and size of her abdomen. According as this is contracted or shrunken, or is distended with eggs, so varies size and shade of color of the queen. But a dark queen will never be light or vice versa; each will retain her original markings, some being like rich, mottled mahogany, and others golden yellow, almost to the very tip.

But color and size of abdomen are of little value in selecting queens. For fine queens select those with a large thorax, long wings and legs, and who stand high, or as a fancier of game fowl would say who have a fine "station." Such queens will necessarily be long in abdomen, even though it may not be apparent at time of selection.

Queen raising is a subject by itself and can be but alluded to here. Whatever system the bee-keeper adopts, let every energy be bent towards producing the very best possible under that system, not towards raising the greatest number. The veteran, Dr. Gallup, has recently in the American Bee Journal been urging the need of raising long-lived queens; and hence, of necessity, long-lived bees. It is a need of bee-keeping that deserves the greatest publicity and a virtue in queens which each bee-keeper should foster by every possible means.

Queen introduction, once the great worry to the bee-fancier, is fast losing its terrors, and soon will have none at all except, perhaps, for the veriest tyro. Among all the systems I have found the "direct" method of introduction to be the safest as well as the most expeditious and economical. It matters not to me whether the old queen has just been removed or has been out several days (provided they have no sealed cells), nor whether the queen to be introduced came by mail or was taken from a neighboring colony. Nor does it make much difference whether or not the honey flow is good or bad. The new queen is caged alone in any conveinent receptacle and kept warm for twenty or thirty minutes. Then a few puffs of smoke blown well into the entrance of the hive, and a few more puffs over the frames when the cover is removed, and the queen is allowed to run down on the combs and it is done. I often pick out a comb and let the queen out onto it, watching her ask first one bee and then another for food until one is found who will give the desired luncheon. I never hesitate to look into such a colony at any time thereafter, and I have yet to lose a queen so introduced. Several times recently, when hurried, I have kept the queens "in solitary" but ten minutes, and yet was successful. I put in virgins in the same way and with equal success. For smoke I generally use pine planer-shavings, sometimes tobacco. I can see no difference in results, and under some circumstances I am equally successful where no smoke at all is used.

I clip all queens. To do this I grasp at the thorax with the thumb and forefinger of the right hand. That avoids pinching the abdomen and gives me firm hold of the wings; I next pass the queen to the left hand grasping her by the sides of the thorax, which prevents her getting hold with her feet and pulling and twisting. Then with a pair of fine scissors I clip such wing as I choose and release the queen on the comb. The only time the picking up process is not all that could be wished, is when the fingers are daubed with soft propolis, as they sometimes are in very hot weather. It takes but a little practice to be able to handle queens quickly and safely.

Providence, R. I., June 30, 1902.

Is Red Clover a Honey Producer?

(G. M. Doolittle.)

"GOOD MORNING, Mr. Doolittle. I see by the American Bee-Keeper that you answer questions for readers of that paper sometimes, so I have come by letter all the way from Michigan to ask you about honey from red clover.

"I was reading in one of my papers a day or two ago, when I came across the statement that red clover is a honey producer, and today I told a bee-keeping neighbor what I read and he claims that it is not. Will you please tell us which is right? I am a beginner in apiculture."

The above is a part of a letter lately received, and in reply would say that perhaps both the writer in the paper and the bee-keeping neighbor are right, as they view the matter from different standpoints, I calculate. Red clover is certainly a honey producer, as any one can tell by pulling the blossoms from the head and squeezing them between the thumb and fingers. In fact, I believe that red clover gives more nectar than any plant or tree with which I am acquainted, not excepting that famous honey- producer, the basswood, or linden. I never pulled the blossoms from a head of clover yet but what there was honey or nectar in them, no matter at what time of the year it was; and in this locality the result is always some nectar, the same year after year, whenever the clover has blossomed; so I think the question should be a settled one by this time, and the fact become prominent, that red clover always secretes nectar, or produces honey, if you please to so put it. Now this fact does not clash in the least with the statement of your neighbor who told you that the honey bee did not bring in honey from red clover, as that is what is undoubtedly meant by red clover giving no honey.

A plant may secrete honey profusely and yet the blossoms be so shaped that the honey bee cannot reach this nectar without the aid of some other insect or bird to break open the corolla, or blossom near the base, as is the case with the flowers of the plant known in this locality as "comfrey," and with the blossoms of the common whitewood. In both of these, wasps, other insects and birds, bite or peck through at the base of the flower to get at the sweets, after which the honey bee comes in for its share, swarming about these bitten flowers, and collecting what the others do not consume. In certain seasons and in some sections of the country, the corolla of the red clover grows so short, from drouth or otherwise, that the honey bee can reach the nectar secreted by the blossoms, in which case, from a fair to a good yield of honey is secured by the bee-keeper from red clover, as has been reported several times in our bee papers. In other seasons the secretion of nectar may be nearly, if not quite so good; but the corolla grows so rank and long that it is of little use except to the bumble bees, as wasps and other insects do not bite the clover tubes. Any person viewing the fields of red clover during a season like the one last spoken of, with a view of deciding as to the value of this plant to the honey bee, would be apt to decide that "honey bees never work on red clover."

Again, we sometimes have a season when the weather is so favorable for the secretion of nectar with red clover, that said nectar rises so high in the corolla of the blossom that the honey bee can reach it, no matter how long these corolla are, as was the case here last year. After considerable examination, I could not discover that the bloom was more dwarfed than usual, but I could discover that the little tubes containing the nectar were nearly half full in some instances, while the majority of these tubes had so much nectar in them that the honey bee could easily reach this nectar and drain it off as far as they could reach, the result being that I secured an average yield of over 100 pounds of red clover honey from all colonies worked exclusively for comb honey. And the strange thing was that this great secretion was only very local, right here between Skaneateles and Otisco lakes, which are only about four miles apart; little or no red clover honey being secured on the other sides of these lakes, nor beyond them at either head or foot.

However, as a whole country, we can hardly calculate on many seasons in which much honey is obtained from this plant, for there are far more years in which the bees get little or nothing from it, than there are those when the hives show a gain while it is in blossom.

Borodino, N. Y., July 1, 1902.

ITALIANS AS ROBBERS.

Also Something About Clipped Queens and Virgins in Swarming.

(Dr. C. C. Miller.)

ON PAGE 129 the editor quotes me as saying in effect that when all the bees of an apiary are Italian there is scarcely any need of precaution against robbers, and closes by saying: "For persistent robbing propensities we have had to do with pure Italians which we should not hesitate to match against the world." Now Mr. Editor, rather than to come to blows, I'm willing to arbitrate the matter, taking Deacon Hardscrabble as umpire.

First, Mr. Editor let us look at your view. You think Italians, at least some of them, great on robbing. Taking the standpoint of a bee, I don't see anything wrong in that, and I don't suppose you do. To the bee the main thing is to get something, by preference from the flowers, from the hives of other bees if need be, and from that it follows that the more persistent gatherer they are the more persistent robbers. So I'm quite willing to believe that among Italian bees you may find the champion robbers, and our quarrel cannot be on that point.

Now, for the other side. If in a time of scarcity, I have a weak colony of queenless black bees, and my neighbor's bees come and rob that colony, I have no right to blame my neighbor's bees; the fault was in the defenceless condition of my colony. We do not seek to prevent robbing by doing anything with the robbers—any bees will rob under circumstances favoring robbing—but we depend upon the defence. Italians are good defenders as well as good (or bad) robbers, so when "our bees are all Italians we need take little precautions against robbing.

Now I rest the case for John's decision; indeed I'm not sure but I'm ready to leave the decision with you Mr. Editor.

But that's not the only trouble for me in the July number. I have said if a colony with a clipped queen should swarm and the clipped queen should remain, she would be killed when the time came for the young queens to take charge. M. W. Shepherd says I'm wrong. I'll not arbitrate the case, for he has the facts on his side, having had 25 per cent of such colonies swarm with the young queen while the old queen remained in the hive. I had never had his experience, and so far as I remember his is the first experience of the kind I have known to be reported. Thanks, friend Shepherd, for making me know better.

Mr. Shepherd says we are told in the American Bee Journal "that queen cells were always left by the retiring queen, and about a week after the swarm had issued, the cells would begin to hatch," but he often found that no cells were started. The statement in the American Bee Journal is all right except the "always," for there are exceptions, especially since introduction of Italians.

Possibly I don't understand him correctly about swarms issuing with a virgin while the old queen remains unharmed. I'm a little puzzled to understand where the virgin comes from if he has cut out all cells. Or does he mean that a virgin will be reared and the swarm issue with that virgin without any swarm having first issued with the old queen? In either case it is something that has not been given before to my knowledge.

Marengo, Ill., July 8, 1902.

Philadelphia Bee=Keepers Have an Outing.

(M. F. Reeve.)

MR. HAROLD HORNOR, a young and energetic New Jerserseyman who combines the business of a nurseryman along with bee-keeping outside the town of Mt. Holly, N. J., invited the members of the Philadelphia Bee-Keepers' Association to take their July field outing at his place on Saturday, July 5.

As Hornor's name is a symbol for hospitality and as his apiary is regarded as not only the largest but the best kept one anywhere around Philadelphia, twenty-four men and women availed themselves of the invitation.

Mr. Hornor is up-to-date in all his methods and appointments and is very fond of making experiments in testing new methods of queen rearing, etc. His queens are raised by the Pridgen system with Hornor's improvements, and the samples submitted were certainly of fine coloring and said to be of good honey gathering qualities. It was a treat to the spectators to inspect the hives tiered up five stories high and filled with heavy sheets of white clover honey, so heavy that a filled box was a good lift for a man. These were ready for the extractor. Mr. Hornor said that he expected to get 3000 pounds of extracted from upwards of forty colonies. He uses a Cowan No. 15 extractor.

One of the sights that attracted most attention was a couple of diminutive hives illustrating the Swarthmore plan of queen rearing.

These hives each contained two little frames about the size of honey sections.

E. L. Pratt, of Swarthmore, who devised the system and who was a pupil of Alley, the Massachusetts breeder, happened, by good luck to be along with the party as the "baby" member and he had to explain the whole thing to President Townsend and the others. After the inspection the members held a business meeting under the shade of the maple trees surrounding Mr. Hornor's home and discussed "foul brood" and Vice-President Flower's "queen breeding in confinement under a tent" and other topics and after a rousing vote of thanks to Mr. and Mrs. Hornor, for their generous hospitality were driven to the train for Philadelphia.

The June meeting was held at the apiary and home of W. A. Selser, at Jenkintown, and the next one will be at Vice-President Flowers's apiary, at Ashbourne.

Rutledge, Pa., July 6, 1902.

Forecasting the Honey Crop—A Good Season for White Clover.

(J. H. Andre.)

FOR several years past I have been wondering if a good maple sugar season was also a good honey season. There has been no good seasons for either for a number of years until this season, which was the best for sugar making of any season in many years. During the same length of time there was but little white clover and scarcely any at all last season.

This season the pasture fields are whiter with blossoms than I ever knew them to be before. The lawns are more or less seeded, meadows and highways have considerable and even fields that grew tilled crops are sprinkled with it. There is a great mystery among farmers as to how the land became so fully seeded after several seasons of scarcity. There can be only one solution—the seed does not always grow the first season.

Bees are busy on clover when it is not too cold for them to work. It is too early to predict on the season but it would be well to watch in different localities to see if there was plenty of nectar where there was plenty of sap during the sugar season. If the two run together generally it will give bee-keepers an idea of what they will need each season.

Waverly, N. Y., June 22, 1902.

Bees Moving Eggs and Larvæ.

(F. Greiner.)

IT is a question with many bee-keepers of this and foreign lands whether or not bees ever move eggs or larvae from one cell to another. Rauschenfels of Italy denies that bees can do so. Staeule of Switzerland is not satisfied that they can or cannot transport eggs or larvae. Gerstung of Germany thinks now, that some evidence that he has had of late point out that they may. Dzierzon does not believe in it. Dr. Gallup, of California, thinks bees cannot do so. Certainly we have very little evidence that bees can do such a thing.

Among fifteen artificial queen-cups, that had been stocked with young larvae by myself, the larger part of which had been built out and finished up to near maturity, I found one the other day with a half-grown larva in it. The cells had been glued to a naked wooden bar. This is a singular occurrence. There were eggs and larvae in the hive at the time of giving the cell-cups.

Naples, N. Y., June 30, 1902.

The Editor and the Bird.

THE Gainesville Sun states a fact and asks a question thus: As a newspaper representative and three candidates were entering about dusk, on Thursday evening, the great plain known as Payne's Prairie, a chicken hawk shot past the carriage seemingly in great terror. Strange to say, perched on the back of the hawk was a bird about the size of a canary, pecking the hawk's head with all the power he had in his little bill. Who knows the name of this brave little bird? Can any reason be given why the hawk did not turn and rend it?

In the days that have passed and gone the chicken yards of the South usually contained poles from which gourds were hung, on one side of which an opening had been made for the entrance of a little bird that guarded the vicinity from birds of prey in return for a home and shelter. The boys of the family were rigidly enjoined against disturbing these friends, and strenuous application of the paddle was the certain punishment exacted when the amateur marksman sought practice or fun at the expense of this most effectual protector of the barnyard. He was called the kingbird or the bee martin, and he never shirked battle with any antagonist—he would attack a soaring hawk or eagle as quickly and fiercely as a noisy crow, but never molested the songsters or the grain-eating members of the family.

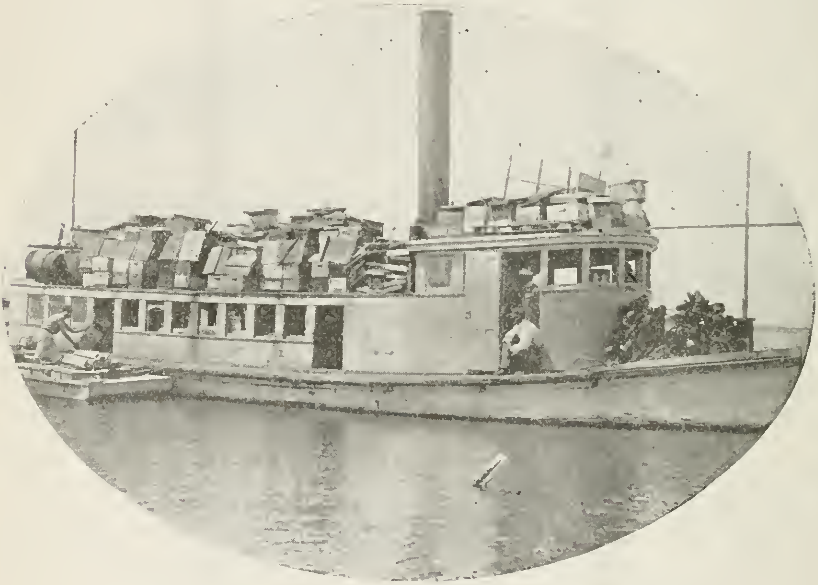
Lately a farmer, mourning the lack of profits from grove and garden, was asked why he did not try chickens, and made answer that the woods were full of hawks; he did not have time to hunt them like a little boy! Half-science has clearly convicted our little friend of eating bees, and he is denounced by those who never gather a pound of honey except from the market in all their lives. It has been also proved that the kingbird is a friend as well as enemy to the bee, since he catches also the moth that enters their homes to destroy the young, but the one sin seems strong enough to beat down a thousand virtues, and the little king has been driven to wage warfare on his enemies and ours in the wastes and wilds like Payne's Prairie, while a paper that is a friend and advocate of the farmer has forgotten his name and existence. It is to our shame that this is so.

What was the name of the little fellow that sat on the hawk and "pecked and pecked?" Kingbird, beemartin, Tyrannus carolinensis, a flycatcher. "Why did not the hawk turn and rend him?" Just then because the hawk could not shake him off and the dwarf warrior was striking for his eyes and he was keeping his head down to save that organ. When the hawk appears the king calls to his mate and the two rush to the attack with the directness of Schley's ships and almost with the swiftness of a shell from the Brooklyn. They attack on opposite sides and each tries to rise above the other—the female distracts the attention of the enemy while eluding blows from beak and talons by sudden turns and quick rushes to get in. But woe to the hawk that delays to strike at her—her mate has rushed above and then down—he clutches the feathers at the base of the skull and strikes straight for the eyes while beating with his wings to confuse and distract. Then the hawk takes to headlong flight and will dive through thick trees to free himself, or, blinded by the wings, will sometimes kill himself by striking against an obejct in the way.

Let the Florida farmer recognize the kingbird as his friend and give him the toll of a few bees gladly—he has earned them. We heard lately of a farmer, not considered penurious by his neighbors, complain of the protection our law gives to mockingbirds, "because they ate his grapes and seeds!" Shall we take all and give nothing? Why not adopt Burns's feeling for the mouse that took a little of his grain:

> "I'll get a blessin' with the lave,
> And never miss it."

—Florida Times-Union and Citizen.



OPERATIONS OF PAT, THE NEW STAR, ON INDIAN RIVER.

The Best Bee—Neatness in the Apiary.

(W. W. McNeal.)

LAYING aside all idle dreams and taking the facts for what they are worth, the much abused hybrid bee is a pretty safe one to tie to in the race for honey.

I do not mean that class of hybrid which shows but one yellow band, but a first cross of the old Italian with the common black race. This combines in one colony the good qualities of both races with an added tinge of vitality that is refreshing to look upon.

The queen of a hybrid colony commands the admiration of all by reason of her great size and capabilities, for she is of the flower of the Italian race of bees. It is a great pity that these representative queens cannot be controlled when taking their mating flight and not allowed to roam far beyond the range of choice drones in the home yard. As it is, second rate queens are of necessity largely used for breeders for the sake of yellow bands.

I believe I am safe in saying, that, as a rule, bees are kept for honey, which in short means money, for ought bee-keepers may say they are in the business for fun. At any rate "the fun" seems to materialize best when well-filled supers are in evidence. And for this reason the type of bee that is best fitted for rough and tumble work should be given the preference over the others. Yes sir, all things considered, the bee that suits me best is a first cross of the original Italian with the common black bee.

NEATNESS IN THE APIARY.

I love neatness in the apiary. I love to see the grass well-kept as on the lawn. I love to see the hives clean and white with paint, standing in military order throughout the yard. I love to see every stone and chip in its place beyond the bounds of the apiary. In short I do love to see the apiary in apple-pie order and at all times. But does it pay in dollars and cents? Nay, verily! I am sorry to admit this, but in the flurry and bustle of "the funny" season when one has to get his dish right side up and get it that way quickly, then it is seen that the stone and the chip are conveniently arranged when lying promiscously about the yard. A hive-stand needs to be leveled up; a coverboard weighted down and —well isn't it annoying to be compelled to run to the woodyard for every little piece that is needed? Then again how nice it is to always have your bee brush right at hand in the shape of a tall bunch of grass. What is more suitable for brushing bees than a handful of these grassy tender shoots?. Bees show as little resentment when using such a brush as it is possible to receive from them at any time. But in brushing bees off their combs it is best to give the combs a gentle tremulous twirling or shaking before the brush is applied. Dipping the brush in water adds much towards the prevention of stings; but the real beauty of a brush of grass and of having the grass right at your feet is that so soon as it begins to smell of poison from the bees it can be thrown away and replaced with another.

Then we find that the practical and the ornamental effects do not readily combine in the bee, nor apiary either.

River Forest, Ill., July 14, 1902.

A Home-Made Decapper—An Improved Section.

(M. F. Reeve.)

I have made handy uncapping devices out of two wooden chopping bowls or dough trays which I picked up one day on the bargain table of a department store at ten cents apiece. They were over two feet long with handles at the ends. I bored inch and a half auger holes in the center, and painted the whole inside of the bowl with melted paraffine making them honey proof. Then I made a frame to fit on top of the bowls, from wooden strips one-half inch wide on which I tacked screen cloth. When I have any uncapping to do I set the wooden trays over enamelled or agateware dishes, put on the screen wire frames and drop the capping on them. The honey runs down to the center hole and into the bowl beneath and the cappings drain themselves nicely ready for the solar extractor.

A little warm water cleans the bowls and they dry off soon behind the stove or range; and there you are.

Mr. John Hooker, a veteran bee-keeper, who is up-to-date, said at one of the recent meetings of the Philadelphia Bee-Keepers' Association that he could not understand why the American supply manufacturers did not catalogue a section which had a great sale in England, and which was manufactured and exported by at least one large American concern. He said that the top fourth of the section instead of being in one piece was divided lengthwise and each half was provided with a bevelled central cut. In placing sheets of foundation in the sections, one-half of the top was pressed into place, the sheet of wax was then pressed down upon the top with the fingers; the other half of the wood was brought down and secured and this served to fasten the foundation snug and hard without the need of a Daisy or any fastener. He said he guessed the only reason why this form of section was not put on the market was because it would interfere with the sale of foundation fasteners. Not one present at the meeting had ever seen such a section but Mr. Hooker, and general surprise was expressed that it was not put on the market.

Rutledge, Pa., July 20, 1902.

PROGRAM

Of the Thirty-Third Annual Convention of the National Bee-Keepers' Association To Be Held in Denver, Colo., Sept. 3, 4 and 5, 1902.

FIRST DAY—WEDNESDAY.

Evening Session, 7:30 p. m.

Invocation.

Music.

Addresses of Welcome by President Harris, Mayor Wright and Governor Orman.

Responses by President Hutchinson, Secretary Mason, and Director Miller.

8:30 p. m. "Bee-keeping from the Atlantic to the Pacific, as seen through the Camera and Stereopticon." By E. R. Root, Medina, Ohio.

SECOND DAY—THURSDAY.

Morning Session, 9:00 a. m.

Music.

President's Address, "The Future of Bee-Keeping."

Discussion.

10:00 a. m. "Which is the Most Hopeful Field for the National Association?" By Dr. C. C. Miller, Marengo, Ill.

Response by Rev. E. T. Abbott, St. Joseph, Mo.

Discussion.

11:00 a. m. Question Box.

Afternoon Session, 1: 30 p. m.

Music.

"Reporting of the Honey Crop, When, and How it Should be Done." By C. A. Hatch, Richland Center, Wis.

Response by Frank Rauchfuss, Denver, Colo.

Discussion.

2:30 p. m. "Bee-Keeping Lessons That May be Learned from The Word Locality." By H. C. Morehouse, Boulder, Colo.

Response by E. R. Root, Medina, Ohio.

Discussion.

3:30 p. m. Question Box

Evening Session, 7:30 p m.

Music.

"The Outside and Inside of a Honey Bee." Illustrated by Stereopticon, By Prof. C. P. Gillette, Ft. Collins.

THIRD DAY—FRIDAY.

Morning Session, 9:00 a. m.

Music.

"Selling Extracted Honey at Wholesale—How to Get the Best Prices." By J. F. McIntyre, Sespe, Calif.

Response by T. Lytle, Manzanola, Colo.

Discussion.

10:00 a. m. "Putting up Extracted Honey for the Retail Trade." By R. C. Aikin, Loveland, Colo.

Response by G. W. York, Chicago, Ill.

Discussion.

11:00 a. m. Question Box.

Afternoon Session, 1:30 p. m.

Music.

"Managing out Apiaries for Comb Honey." By W. L. Porter, Denver, Colo.

Response by M. A. Gill, Longmont, Colo.

Discussion.

2:30 p. m. Question Box.

3:30 p. m. Trolley Ride—"Seeing Denver."

Evening Session, 9:00 p. m.

Banquet.

A. B. Mason, Secretary.

OUR CORRESPONDENTS

Silvara, Pa., July 2, 1902.

Editor Bee-Keeper:—Which is the best way to tier up supers on a hive, to put the empty one on top or to raise the filled one and place the empty one under? Please answer through The Bee-Keeper.

On June 6 I hived a swarm on nine L. combs; June 20 I put on the surplus case and on the 28th they were storing honey. Who has a colony to beat this record? Yours,

Z. Cornell.

If the nectar yielding bloom is plentiful and indications are favorable for a continuation of the flow, it is advisable to raise the super in which the work is nearing completion and set the empty one below, as you suggest. If the one is "filled," however, it is better to remove it as soon as the bees begin work in the new one, if not at the time of placing the empty one in position. The usual method, is to give the new super as soon as the first is about two-thirds completed; though, in the event of a cessation of the honey flow at this time, there is some danger of the bees carrying the honey from the upper to the lower super. If the continuation of the flow is a matter of question, and yet the bees appear to be in need of more storage room, it would be safer to place the new super on top, thus allowing the partly finished sections to remain nearer the brood to be completed as far as possible. Local conditions must necessarily govern this operation, and the bee-keeper must rely largely upon his judgment as to the best thing to do under existing conditions. The plan of raising and tiering from below is thoroughly practicable, with some experience as a guide: but rather a dangerous procedure otherwise.—Editor.

THE
Bee-Keeping World

BULGARIA.

A bee-keeper living in a district of Bulgaria between the Danube and the railroad Rustschuk-Varna has this to say about his bee business: "Our hives are made of willow, basket fashion. When the swarming season is over we have from five to six hundred colonies in two yards. Little attention is paid them after swarming time. About twice each week we visit them, passing through between the long rows of hives and where we notice any bees dancing around the entrance of a hive, the bees letting their legs dangle down, that hive is doomed and we brimstone it at our earliest convenience. It is queenless and would be ruined by robbers and waxmoth long before we would get around to take up the others. We have no other way of ascertaining queenlessness. Of the five or six hundred colonies all but one hundred or one hundred and ten are brimstoned.

BRAZIL.

Gunther of Brazil reports in Centralblatt that bee-keeping does not pay there very well. The climate is so mild, bees can fly every day in the year, consequently they breed without interruption and so use up about all the honey they gather. Pollen is brought in every day, honey very irregularly, some years almost none at all. Still many bees are kept—five or six hives to every household. In poor years whole apiaries die out; in good years they do quite well. But it is rare to find wild bees in the forests: which perhaps may be considered proof that the conditions are not favorable to bee-keeping. The wax-moth is the worst enemy of the bee, but there are many others, such as ants, birds of various character, toads, etc. Where bees are not watched daily it is not an uncommon occurrence to find all gone without being able to ascertain the cause. Honey is not safe except when kept in tightly covered glass or earthen vessels. Wooden receptacles will not do as ants will soon destroy them and tin rusts out very soon.

FRANCE.

To prevent the rearing of brood in the extracting supers the Frenchman, Derauchelle has developed the idea of constructing combs or foundation with square cells and filling the supers with such foundation. Haineause in Revin offers to make the mills.

GERMANY.

Dr. Miller is quoted in Deutsche, B. Z. as saying: "Queens develop in strong colonies inside of thirteen days."

Reidenbach says: "A queen is in the egg state three days, in the larval state six days in the pupa or nymph state seven days. According to my observation the larval state lasts nearer five than six days.

To get his New Bee-Journal into circulation the editor of Freudenstein promises to make good to his subscribers all winter losses caused by cold, dystentery, starvation, dwindling, etc., when such losses are not brought on by neglect, accidents, etc. He will also sell to subscribers only celebrated American long-tongued red-clover queens at ten marks for fertile queens, three marks for virgin queens.

Reidenbach says, in Phaelzer, B. Z.: For the purpose of requeening it is best to use swarming cells. If one of the best colonies can be made to swarm, one might better not get a crop of honey from it and make good use of all the cells built. It will pay better in the end.

The Leipziger, B. Z., says that in manufacturing districts the presence of coal smoke from the furnaces has materially lessened the yields from the hive. This is not mere opinion as the evidence seems sufficient to prove that flowers do not secrete honey freely where coal smoke is present.

In "Die Biene" Dickel points out the defects of our present hives. They should be so constructed as to more resemble the box-hive. The combs should be attached to the walls of the hive or the equivalent of it. There should be no bee-space above the combs, etc. Dzierzon would sanction all this. However, the majority of bee-keepers everywhere want their hives more convenient and willingly put up with the disadvantages pointed out.

F. Greiner.

GERMANY.

Measurements of bee's tongues with glossometers have given lengths of 71 to 95 tenths of millimeter. These were rather tongue reach, being measured from the surface of the honey to the thin tin surface through which the bees had sucked it. The holes through which the bees thrust their tongues were round and of a diameter of two millimeters.

BELGIUM.

Planting trees along the public roads is a subject often mentioned in Europe. Of course the agriculturists want some trees that would be useful to them or rather to their bees. The lindens (bass wood) are often mentioned. There are in Belgium several varieties. 1st. The small-leaved linden, which grows wild in Holland and is often planted in parks, promenades, etc. It blossoms in June.

2nd. The large-leaved linden. It is a larger and better looking tree than the preceding one. In 1901 the trees of that kind planted at Floberg were in blossom from the 26th of June to July 16. Some of the trees blossom sooner than others.

3rd. The silver-leaf linden. This has been imported from Turkey and Hungary. It has a splendid shape and foliage and a profusion of blossoms. These open in July.

4th. The American linden. Imported from the United States into Europe in 1871. It blossoms in Holland in August.

By combining the four kinds a honey flow from June to August, inclusive could be obtained in Holland. But the summer climate of Holland is much colder than ours. The effect of it is a much larger and a much later blossoming period. Nevertheless, it remains certain that the four kinds blossom in succession. And should they be introduced here, the linden flow would be twice or three times as long as it is now with only one kind.

Adrian Getaz.

THE SEASONING SERIES
MANY THINGS BY SEASONINGS SEASONED ARE

Dear Brother Hill:

"Let Hercules himself do what he may,
The cat will mew, the dog will have his day."

Which is quite apropos of the cats and dogs who are having their day at the head of the "National," and from the ructions I surmise they are having their last days, and high old ones too. Deucedly secretive they are, but just wait until the boys get at the true inwardness of matters and the whole top of the thing will follow the top of old Mt. Pelee. If we uns don't get some sound scheme for electing officers and directors by a popular vote that can't be "fixed," we'll 'wake some fine day to find our beloved little association has become a veritable "Old Man of the Sea" and we'll have a tougher job than did Sinbad to get rid of him.

The endless term directorate business is generating unsavory odors. Two terms are enough and they shouldn't be consecutive.

"When impious men bear sway.
The post of honor is a private station."

Some of the "dearly beloved" are trying to run the thing as they want it, not as is best for all. Hope you won't say nothin' about this, for if it got out 'mongst the boys 'twould raise a right smart rumpus and Denver couldn't hold the ex-directors. No siree, they'd skip into their holes quicker and take the holes in after them. "To reign is pleasant though it be," etc., but to lose the job—say Harry, that would be something awful to contemplate.

What will the editor of Gleanings do next? June 15 he had a picture of persons he thought were "twins." One was the genial doctor of "Straw" fame, who is some seventy odd years of youth and t'other governor publishes a bee paper in Cook county, North America, and rejoices in forty years and sundry other things. Poor E. R., the camera is too much for him, for one picture shows a cigar in his mouth and now he is very busy explaining. Condone with him, can't you?

Have you heard the latest news from Rambler? Well, he went to Cuba just to "prospect" don't you know. Finding the laws more liberal or lax than in Utah vicinity he's squatted and has now sent to a friend for a score or so of "esposas." Ye shades of Brigham Young! Lively times ahead for the

poor wanderer. Let us hope he will get a full assortment.

Now what sort of a grudge has Brother Kerr got against the novices for d'ye mind his remark "the true sort of a bee man considers transferring great fun." Well it may be when done Jimmy Heddon's way, but by t'other ways 'tis "sulphurous."

Didn't I tell you the quiet, peaceful, soft-soapy times were passing and that the healthy, wholesome, fighting days were coming. Let 'em come, I'm ready, are you? Some of the older veterans are already kicking vigorously because they and their foibles are being assailed and they are wildly cracking every head in sight. Hurrah for a Donny Brook Fair!

Yours as ever,

John Hardscrabble.

SECCIÓN ESPAÑOLA.

"The American Bee-Keeper" se envia á principio de cada mes. Si por algun motivo el suscritor no recibe su periodico á su debido tiempo, sirvase notificarnos y les enviaremos otro ejemplar.

Todo asunto relacionado con la Dirección y subscripción á este periodico, debe enviarse á "The American Bee-Keeper, Fort Pierce, Florida. El dinero puede remitirse por giro postal. El giro puede hacerse á The W. T. Falconer Manufacturing Co., en Jamestown, N. Y., cuando convenga más á los marchantes de esa casa.

Cuando el suscritor reciba el periodico con una faja azul es para avisarle que su subscripción termina con ese ejemplar. Esperamos ser favorecidos con orden para continuar la subscripción. Rogamos á nuestros corresponsales escriban los nombres y direcciones bien claro para evitar demoras.

Una faja roja indica que se debe la subscripción y esperamos su pronta atención al particular.

Subscripcion: 50 centavos al año.

MISTERIOS DE LA COLMENA

Guia del Apicultor Cubano.

por el

DR. JUAN B. PONS Y FONOLL

y anotada por el

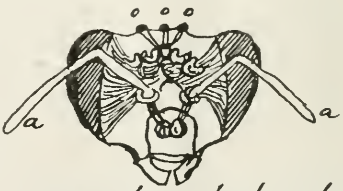
DR. GONZALO G. VIETA.

(Continua.)

Los ojos son velludos, apareciendo los vellos en la union de las facetas, y el numero de éstas, es extraordinario pues son cerca de 17,000 en un solo ojo compuesto.

Estos ojos no tienen movimiento, es decir, que estan fijos, pero como son bastante convexos y sus facetas dispuestas en todos sentidos, pueden ver de todos lados á la vez, y sin embargo, no se ajustan á la vision de diferentes distancias, siendo mas apropiados para largas que nó para cortas distancias, lo que se prueba al mover una colmena de lugar, aunque sea solo unos cuantos pasos. Las abejas se mueven y recolectan en el primitivo lugar, hasta que al cabo de cierto tiempo, mas o menos largo, se aperciben de la colmena.

Fig. 14.



cerebro de la abeja.
segun Dujardin.
aa. antena.
oo.o. oceli.

Cheshire ha probado, que la Obrera que tiene que trabajar en plena luz y al aire libre, posee en sus ojos compuestos 6,300 facetas. La Reina que sale poco y que por lo tanto vive casi siempre, en la oscuridad, solo posee 4.920 facetas.

pero los machos ó zánganos que necesitan ver mucho cuando la Reina sale á su paseo de boda, tienen tan extraordinario desarrollo de sus ojos compuestos, que estos poseen 13,900 facetas.

Sir John Lubbock ha probado, con interesantes esperimentos, que las abejas pueden distinguir los colores. Colocó un poco de miel en un pedacito de papel azul al lado de otros pedazos de papel del mismo tamaño y de distintos colores. Enseguida acudieron la abejas y cuando se retiraron, cambió la posicion de los pedazos de papel colocando, el azul, en otra posicion y sin miel en él. Las abejas acudieron y se dirijieron rectas al papel azul.

Otra prueba convincente, es la de que las abejas cuando recolectan pólen, se le vé que cada una carga deun mismo color, es decir, que se empieza á carga pólen amarillo, seguirá recogiendo del mismo color hasta completar la carga; nunca mezclará pólen de varios colores.

Dentro de la cabeza, se aloja el cerebro, muy desarrollado en la obrera y es

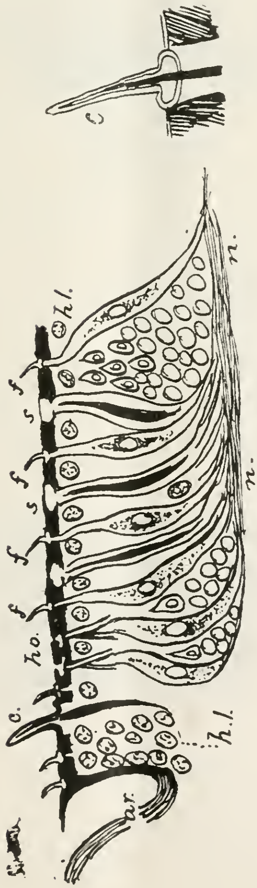


Fig 11.

Section longitudinal á traves deuna parte del Flagelum de una antena. (300 diametros. segun Cheshire.)

f. pelos tactiles; s. organos del olfato; ho. cavidad; c pelo conoide; hl. capa de tegido hipodermico; n.n. ramificaciones de los nervios; ar. articulacion. — c. pelo conoide aumentado en 800 diametros.

digno de observarse, que los machos que tiene la cabeza mucho mayor, poseen un cérebro mas pequeño, esto coincide con el hecho de que los zánganos, son poco inteligentes, mientras que nadie rehusará la inteligencia á las obreras, nodrizas y constructoras.

El cérebro, asemejanza del nuestro, está encerrado en membranas y está compuesto de substancias blanca y gris, y es indudablemente el asiento de la inteligencia, siendo la abeja el mas inteligente de los insectos, como lo indica el tamaño de su cérebro que es, como 1-174 del total de su cuerpo, mientras que en la hormiga es solo como 1-286 y en los demás varia de 1-3900 á 1-4200.

Los nervios están compuestos de un hacecillo de fibras, algunas sensitivas y otras motoras, los cuales forman abultamientos ganglionares que corren á lo largo del cuerpo separándose próximos á la cabeza, y despues de passar al rededor del esofago, se ensanchan formando un gran gánglio que es el que forma el cérebro. Desde éste se extienden innumerables fibras que á cada lado llegan á los ojos compuestos. Segun Girard en la larva de la abeja existen 17 gánglios. El supra esofágico ó cérebro, tres sub-esofágicos, tres torácicos, uno para cada anillo y diez abdominales.

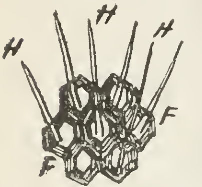
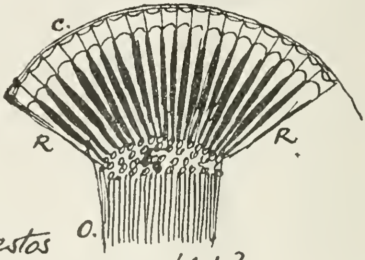


Fig. 12.

F. facetas
H. pelos.

Ojos compuestos



Fig° 13.

C. cornea.
R. varillas ó bastoncitos
E celdas.
O. nervio.

Estos ganglios se unen de tal modo, que en la abeja adulta solo existen nueve gánglios por todo.

El aparato circulatorio es casi insignificante. El corazon es un largo tubo situado á lo largo del dorso, al cual se sostiene, por poderosos músculos y recibe la sangre por aberturas valvulares las que solo permiten pasar el flùido hácia dentro, cuando es forzado, por la contracción, hácia la cabeza y vaciado en la cavidad general. Asi el corazón, solo sirve para conservar la sangre en movimiento.

Está formado de cinco partes ó cámaras colocadas unas despues de otras, comenzando en el abdómen y terminando en el tórax y la cabeza, por la aorta, que no es contráctil. Cada una de las cámaras del corazón presenta una abertura para la sangre de retorno. La sangre que corre por el cuerpo, encontrándose con el aire contenido en las ramificaciones traquenanas, se revivifica y despues vuelve al corazón.

La abeja no posee vasos sanguineos ó limfáticos visibles que lleven la sangre á las varias partes del cuerpo, ni le es tampoco necesario, porque el flúido nutritivo baña el canal digestivo y asi facilmente recibe la nutricion por osmosis; por toda partes rodea la tráquea ó tubos de aire, los pulmones, y asi recibe el oxígeno y expele el acido carbónico.

Continuará.

¡MIRA! ¡MIRA!

Tenemos una lista completa de los apicultores de la Provincia de Santa Clara, pero quisieramos poseer los nombres de todos los apicultores de Cuba. A todo aquel que nos envié una lista de diez apicultores, fuera de la Provincia de Santa Clara, mandaremos el American Bee-Keeper un año entero gratis. tf

THE AMERICAN BEE-KEEPER

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H. E. HILL, - EDITOR.

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Fort Pierce, Fla.

Subscribers receiving their paper in blue wrapper will know that their subscription expires with this number. We hope that you will not delay favoring us with a renewal.

A red wrapper on your paper indicates that you owe for your subscription. Please give the matter your early attention.

Editorial

The east coast of Florida has experienced a drouth the like of which has not been known in many years. Not to exceed 15 hours rain in eleven weeks, with intensely hot weather, is the report from this section of the coast. Yet, at this date (July 14) the mangrove is yielding honey finely, and bee-keepers are actively engaged.

"Gloriously hot weather, in sharp contrast to the cold and wet, up to July 2," is reported from Illinois.

A profuse white clover bloom, with scant nectar secretion is the report of some of our New England correspondents.

The convention of National Bee-Keepers' Association will be held in Denver, Colo., this year, September 3, 4 and 5.

In response to Deacon Hardscrabble's question, first paragraph, July number, a subscriber writes that in his opinion the "chump" referred to must have learned the business from "another chump," whom he knew to wire foundation in the sections; and when moving, confined (?) his bees with a zinc excluder.

Again we desire to call the attention of our advertisers to the notice printed regularly at the head of this department, and ask them to bear in mind that copy for changes of advertisements must be received at this office not later than the 15th of the month preceding date of issue in which change is desired.

It has been said that sealed in beeswax foul brood spores must necessarily die, by reason of having the air excluded, and therefore no danger could result from the use of foundation thus contaminated. Mr. Henry W. Brice, one of England's most prolific apicultural writers, in the Bee-Keepers' Record, says the spores may be liberated by the bees in drawing out foundation, etc., and thus such foundation become a very dangerous source of contagion.

If our readers everywhere will kindly let us have a brief and general report of the season, it will give valuable and interesting information for our next number. A postal card will do.

When receipting for our annual dues, July 18, General Manager Secor, Forest City, Ia., wrote as follows in regard to the season in his section of the country: "Basswood is just over, and it was pretty good; but the hives were so light when the flow began that there will not be as much surplus as there ought to be."

As it appears to us, nothing but unusually heavy importations of West Indian honey can prevent a decidedly better condition of the extracted honey market during the coming winter. Notwithstanding much that has been written to the effect that West Indian goods can cut but little if any figure in our markets, these goods are largely responsible for the present limited demand for the home production. We hope and look for an improvement in the markets.

Our old friend, E. M. Storer, who has contributed an occasional letter to these columns in the past, from Georgia, Florida and Jamaica, has turned up again—this time at Bermeja, Cuba. Mr. Storer finds Cuba to be an excellent country for honey production, but the low prices prevailing at present for Cuban honey are not at all encouraging. In the employ of a Matanzas firm, operating about two thousand colonies, Mr. Storer last September transferred one hundred colonies from native logs and boxes. In March last twenty more of these crude stocks were added to the yard. From the first one hundred, an average of two hundred pounds of honey has been extracted, and the yard now has three hundred and twenty-four working colonies. Foul brood is reported to be not so bad in that section as it is said to be in other portions of the island.

From Dr. Miller's explanation, in this number, it will be seen that it was not the nonrobbing propensities of the Italians, but, rather their vigilant qualities in protecting themselves against robbers, which gave rise to his observations upon this subject, as quoted on page 129, July number. The doctor's explanation is entirely satisfactory even though it may suggest something approaching stupidity upon the part of his commentator. However, it may not be amiss to state, in this connection, that the word "Italian" is too broad and sweeping to be satisfactorily explicit. Especially of some strains of the golden varieties, it may safely be said that they are most persistent robbers; while some of those more nearly related to imported stock are much less determined in their marauding tendencies; and, we think, sometimes hardly more vigilant in guarding their hives than ordinary German stock. Continued breeding in this country, for color, or other points, generation after generation, for years, has changed to a large extent other original traits, as well, though they are still on the "Italian" list. There are Italians and Italians. Some display marked traits of character quite opposite to those possessed by others; and it is not improbable that traits well defined and quite uniform, existing in 1870, have now become uncertain.

"If you have a colony with lots of drones, or a quantity of drone brood on hand, please express me a nucleus colony at once as I have no drones in the yard, owing to the bad weather." Thus wrote a prominent queen breeder recently to a friend who know absolutely nothing about the stock in his yards, farther than that they are bees. The bees in his charge are entirely made up of pick-up, hit-and-miss stock from a dozen small apiaries. If such carelessness were shown generally in the breeding of queens for the market, there would be little wonder that complaints and disappointment should so frequently come to those who order from and depend upon the extensive advertisers to maintain the quality of their stock. If, on account of adverse conditions, a breeder finds it impossible to provide himself with a supply of drones the superiority of which he has demonstrated, it would appear more honorable to cancel his advertising for the season, and await the advent of more favorable conditions. A breeder who seeks nothing farther than yellow bands of a satisfactory number in the selection of his breeding drones is obviously working a permanent injury to the commercial queen rearing industry. The day and age for "any old thing" in the way of drones, we had supposed long since passed. However, it is morally certain that "the coming bee," of which we used to hear so much, will never be developed by such careless methods; and it is equally certain that if a patron of such a breeder should get value received, he has to thank his lucky star, and not the skill or fidelity or the one upon whom he depends for superior stock.

OVERSTOCKING — "PAT" THE NEW STAR.

For convenience sake we take the liberty to coin a name for the gentleman who came all the way from Asiatic Europe to revolutionize apicultural methods in the western hemisphere, to whom we have referred in recent issues. "Pat" is more convenient than "the gentleman," and as we offer it, not a whit less respectful.

At Pat's urgent request, The Bee-Keeper man recently visited his apiaries in order to give him the opportunity to demonstrate the foolishness of our claim that he had overstocked the range. Pat took great satisfaction in exhibiting the greater quantity of honey found in the hives in the locality having the larger number of colonies. As a matter of fact, the extraordinary spirt of nectar from the mangrove bloom has made overstocking well nigh impossible at this time; so that in a range in which over 300 colonies are foraging the showing of honey in the hives is fully equal, if not better than another one a mile and a half distant, in which there are but 200. Possibly, disadvantages of wind, condition of colonies, characteristics of the stock, inaccessibility of flora, etc., may be responsible for a possible lack in the showing of the smaller force as against that of the larger. In any event, it is improbable that any superior showing of the bees in the more crowded range, might be justly attributed to the fact that a greater number of colonies are kept there.

Pat says McIntyre, of California, with six hundred colonies in a yard, got an average per colony of 170 pounds of honey, while smaller apiaries all around his starved to death. Says he, "If a locality will support one colony, it will in all probability as well support 100 colonies. The fact is, the nectar comes into the flowers for only a short time, and if the bees are not there to gather it at once, it is lost by evaporation. One colony would not be able to gather, say, more than one pound while it lasted; while if 100 colonies were in the field, each would get one pound." Continuing along this favorite line of reasoning, he demanded an explanation of "the fact" that "out in California, in 1900, an apiary of several hundred colonies, with the exception of one starved to death. Is it possible that there was not enough honey in the field to keep that one lone colony alive? Evidently not: for it too died soon after the others, of starvation. If but the one had been in the range from the first, it would also have died. If there had been sufficient honey to prevent starvation in the case of the single colony, so there would have been also enough to have pulled through the several hundred colonies."

He agrees emphatically with Arthur C. Miller, in the belief that bee-keepers read and for years continue to believe, simply because it has been printed, that which is positively false, instead of experimenting and thinking independently. There may be more to Pat's idea than all would be ready to admit. It appears quite in line with an apt illustration of Oettl which is quoted in the revised edition of "Langstroth on the Honey Bee," as follows:

> When a large flock of sheep is grazing on a limited area, there may soon be a deficiency of pasturage. But this cannot be asserted of bees, as a good honey district cannot be readily overstocked with them. Today, when the air is moist and warm, the plants may yield a superabundance of nectar, while tomorrow, being cold and wet, there may be a total want of it. When there is sufficient heat and moisture, the saccharine juices of plants will readily fill the nectaries, and will be quickly replenished when carried off by the bees. Every cold night checks the flow of honey, and every clear, warm day reopens the fountains. The flowers expanded today must be visited while open, for, if left to wither, their stores are lost. The same remarks will apply substantially in the case of honey-dews. Hence, bees cannot, as many suppose, collect tomorrow what is left ungathered today, as sheep may graze hereafter on the pasturage they do not need now.

We are glad indeed that favorable conditions this season are promising a profitable crop of honey in Pat's location and wish it might be clearly demonstrated that overstocking was an impossibility at all times and in all places; a thing which is not liable, in our opinion, to preceded the millennial dawn very many seasons.

We show in this number another photograph of Pat's operations—discharging a cargo of bees from the steamer which shall be retained in memory as the bearer of this human cyclopedia of apicultural knowledge.

Developing the Market.

The following is an extract from a circular of the Jamaica Bee-Keepers' Association, issued last March. It may contain an idea which might be utilized by our own National Association; although it would be unnecessary to send our representative abroad until he had thoroughly worked the United States:

Kingston, March 6, 1902.

Heads of Agreement Between the Jamaica Bee-Keepers' Association and Mr. W. H. Dickson.

The Association having procured Mr. W. H. Dickson a return passage from Jamaica to Bristol on the Port Antonio leaving today, and having paid him the sum of thirty shillings for expenses on board, and the sum of six pounds on account for journey from Bristol to London, and for expenses of board, lodging and business locomotion from the time of landing until the fifth of April, Mr. Dickson agrees to act for the Association as traveller or agent, and to devote the whole of his energy and time in business hours to forward its aims and interests so long as his engagement under this agreement shall continue, by selling honey and other goods entrusted to him at as good a price as possible, by acting harmoniously with Messrs. Brandon & Co., or any other merchant to whom he is accredited by the Association, by trying to improve the reputation of the Associations' goods, and by collecting and sending to the General Manager information that may be useful to the Association.

If the General Manager shall so instruct him he is, on landing at Bristol, to call on Messrs. Elders & Fyffes, with a letter from Mr. Haggart and one from the Association. (Asking them to receive consignments from the Association at a commission of only 1 per cent., which Mr. Dickson sells there, and to bank the proceeds for the Association, paying Mr. Dickson his actual expenses if any are incurred in Bristol after the 5th of April, and remitting the balance to the Association. But, unless the General Manager shall so instruct him, he is to proceed as soon as possible to London, and there call on Messrs. Brandon & Co., at 32 Fenchurch street, present his letter of introduction from Mr. Wigan, and complete the arrangements proposed to them by Mr. Wigan for the issue of sampling orders, and the keeping of a banking account of the Associations' funds in their own names. Messrs. Brandon & Co. will give Mr. Dickson authority to issue sampling orders, and, on his effecting sales, will give delivery orders to buyers in exchange for payment. They will, on behalf of the Association, pay Mr. Dickson his expenses of board, lodging and business locomotion to the extent of about 2 pounds a week.

The Association besides providing Mr. Dickson's return passage and paying him the sums set out at the beginning of this agreement will, so long as he is their agent under this agreement, pay his actual expenses at about the above rate and after the honey season is over for this year, say early in the month of August, they will pay him such further sum, if any, as may be left to them after paying him the said traveling and living expenses out of a fund made up; firstly, of any percentage commissions which they may have earned on the honey or other goods sold by him, and secondly of any sums received by them by special arrangement from members whose honey has been sold by Mr. Dickson at a price certified by the directors to be higher than the contemporary price for that class of honey in Mincing Lane. And in case, owing to Mr. Dickson not having been entrusted with large enough quantities of honey or other goods to enable him to earn enough commissions or special sums as above, the directors may, in their discretion, allot him some special remuneration, having regard both to the means at their disposal and to their opinion of his deserts.

It is agreed that the Association may at any time terminate this agreement summarily, or by notice, by word of mouth, letter or telegram, leaving Mr. Dickson, however his return ticket and his right to his expenses to the sailing of the next direct line steamer, though it is contemplated to continue it at least till the beginning of June. If Mr. Dickson satisfies the directors they will consider that he has the first claim to act as agent for them next season.

Mr. Dickson may terminate this agreement at any time by letter or telegram and making proper arrangements with Messrs. Brandon & Co., or other merchants, to whom he may be accredited, but if he terminates it before the 10th of June he agrees that he will refund to the Association the whole of the sums which they have paid, or caused to be paid to him, less a sum equal to 2 1-2 per cent on the sales effected by him and approved by Messrs. Brandon & Co.

Signed, on behalf of the Association,
by
H G. Burnet, General Manager,
A. E. Wigan, one of the Directors
of the J. B. K. A.
W. H. Dickson.

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No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy white," "No. 1, dark," etc.

Below we give the latest and most authentic report of the Honey and Beeswax market in different trade centers:

Buffalo, N .Y., July 9.—Fancy new honey, 15 to 16 cents. Moderate demand as yet. No demand for extracted. Beeswax is wanted at from 30 to 33 cents for fancy.

Batterson & Co.

Kansas City, Mo., July 10.—Old crop of comb honey cleaned up; new crop on the market. Prospects for a big crop good. The supply is good, with light demand. We quote: Comb, 10 to 12 1-2 cents; extracted, 5 1-2 to 6 1-2 cents. Beeswax is in good demand, with light supply, at 30 cents a pound.

Hamblin & Sappington.

Chicago, Ill., July 7.—The honey market may be said to be on a vacation so far as actual business is concerned. Should the harvest of 1902 be practically a failure there will be no dearth of extracted honey, as there is more of it in storage than we have ever known at this season of the year. If the consumers are not too greatly impressed with the idea that the honey harvest is a failure this season it may be worked off at an advance in price. Beeswax is lower, yet sells well at 30 cents per pound.

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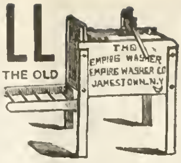

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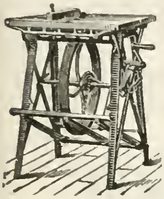

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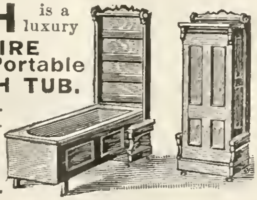

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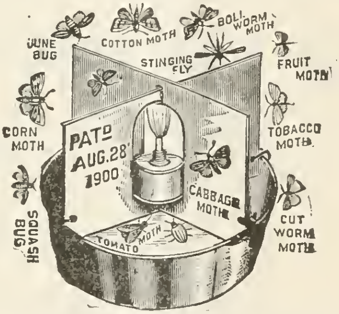

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Vol. XII SEPTEMBER, 1902 No. 9

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Now, I have never found any good reason for trying to outdo nature by forcing a colony to build queen-cells in a way they surely would not do if they had their own way in the matter. I see no reason why artificial cell-cups should be made and eggs or larvae transferred to them, and then compel the bees to rear queens, when they already have a good, prolific queen in the hive. Is that the way bees do if left to select for themselves? Is such a method an up to date plan? Just think for a moment what the effect is on a colony when in a strictly normal condition to have a lot of cell-cups thrust in their hive at a time when they are not in condition for rearing queens. I think it requires from 12 to 24 hours to prepare a colony of bees for cell building. Nothing can be done with the cell-cups until the nurse bees have formulated the proper food for nursing and feeding the royal lavae. Now it is evident that there is an interval of many hours in which the royal lavae are not matured at all; and in the case of rearing queens in a chamber over a normal colony, the young queens are never properly fed.

I discovered several years ago that queens reared over a hive of bees having a good, prolific queen were short-lived and practically worthless. I found that fairly good queens could be reared in above way when bees were gathering honey from the fields. But do such queens compare with those reared where the bees make preparation to swarm? They do not! When cell-cups are given the bees during the swarming period, do the bees, as soon as the queen cells are capped, cast a swarm as they do when they construct cells in accordance with their own will? Do these people who rear such queens have swarms issue at such times? No! And why not? It is the unnatural way for bees to rear queens. But some of the bee-men who rear queens by this unnatural way advertise that they are rearing queens in the only natural way. These fellows are about as bad as the parties who advertise that they have queens whose bees will gather honey from red clover. A man wrote me the other day and wanted a queen whose bees would gather honey from red clover. I replied that I had no such bees and would pay one hundred dollar for such a queen.

Dr. Gallup has written several articles on queen-rearing for another bee-paper. The articles are generally good and much the doctor has said is painfully true; but when Dr. Gallup or any other man says good queens cannot be reared in nucleus hives, he is wrong. Now, I do not rear queens in nucleus hives, but I know good queens—yes, queens far ahead of those reared under the swarming impulse can be reared in very small nuclei; and I now have the queens to show and to prove my statements. The nucleus hives I use for keeping my queens in until they become fertile, are only 5x5, 6 inches deep. They take four small frames.

Now, the fine queens spoken of above were reared in these little hives. After the queens are fertilized and fill the combs with eggs they are sent off to customers and in a few days after queens are introduced and the same process is gone over again in the shipment of other queens. Sometimes when I go for a second, or third queen, as the case may be, I find several fine queen-cells or a nice large queen. These queens are always allowed to become fertile and in all cases prove to be the finest queens.

One of the best queens I ever owned or ever saw was reared in a nucleus hive. The bees were not fed nor nursed while queenless. This queen lived four years and two months and could not have had less than 500,000 children. Does this look as though good queens cannot be reared in small hives with about a pint of bees? I challenge any one to produce better queens than can be reared by the nucleus method. You know, friend Hill, that I have always claimed that I could rear better queens by a method I persue than can be reared at swarming time. When a colony of bees rear queens in preparation for swarming they have a laying queen in the hive. They are in no special need of a queen; and do not produce such good queens as they surely will under other conditions. Now what are the conditions under which bees will rear queens superior to those reared at swarming time? When a strong colony is made queenless either by accident or by dequeening, there not only is a desire for another queen, but an absolute necessity for one. In this case there is a double reason why bees work and bend all their resources toward producing another queen. The bees work with a will; every bee in the hive seems to have a hand in rearing a new queen. How is it in cases where a fertile queen is present? The bees seem to argue in this way: "Well, there are some cell-cups and we are expected to take care of them; we do not need another queen," and the result is, a lot of sickly, inferior queens are born into the world. Bees can't be fooled into rearing queens in that way. They understand that they have all the queens necessary to their existence, and do not work with so much interest as do queenless bees.

In speaking of making artificial cell-cups, instead of allowing the bees to do it for themselves, prompts me to say that such work is not up to present day improvements. What would we say of a farmer if he were to throw aside his plow and dig up his land with a common garden fork? Well now, as bees will, if given a chance to do so, make all the cell-cups that are needed, why should one spend his time in such a foolish way? Some of the men who work the cell-cup plan claim that queens so reared are better than those reared by bees that form their own cell-cups. It would be interesting reading if such reasons could appear in one of the bee journals. Better in what way? Why, the claim is a most foolish one. As everybody knows who has purchased such queens, they are short-lived and worthless. Very few can rear queens by the cell-cup plan and I never could believe the originator of the method used it himself.

I have found that the least disturbance to a queen cell, or the contents of a cell-cup, was sure to be noticed by the bees and all such cells were soon destroyed. For this reason I do not understand how it is that the bees do not remove all the transferred larvae and jelly from the artificial cell-cups, especially where cell-cups are given a colony that is in no need of a queen; or in other words, have a good laying queen. I'll pay the expenses of Mr. D. or any man who will come to Wenham, prepare a lot of cell-cups, transfer larvae to them and put them in a hive of bees having a good queen if these cell-cups are matured into queens that are worth five cents per 100. I don't believe even one cell-cup would be built down to a finished queen cell. The whole business is contrary to nature, or just the opposite to the way bees do business.

Wenham, Mass., Aug. 6, 1902.

HIVE ENTRANCES.

But One Is Needed for Each Colony, and Why This Is True.

(G. M. Doolittle).

AT THE bee-keepers' institute held at Auburn, N. Y., last winter, I heard one or two bee-keepers telling about the several entrances they had to their bee hives; one who had for years kept bees in box-hives arguing that an entrance was necessary on all four sides, so that the frame hive could be something on the plan of the old box-hive set upon blocks so the wind could pass under the hive from all directions during the summer to give ample ventilation. And he was just as sure that an entrance was needed for the supers as that his hives needed entrances on all four sides, "for," said he, "some way must be provided for the bees to go directly into the sections with their loads of honey."

He was so positive in this matter that I saw there was little use in trying to make him believe otherwise, so I simply said, "I think you are mistaken." But now comes a person, who says he takes the American Bee-Keeper, with these questions, "How many entrances should be allowed when making bee-hives? I am told that, besides the front or main entrance at the bottom of the hive, an entrance should be made at the rear also for ventilation, to be opened during hot weather, and one near the top of the hive to be open at all times when the bees are storing surplus honey, so they need not have to travel so far to carry honey from the entrance to the top of a second or third story hive. What is your opinion in the matter? Please tell us in the American Bee-Keeper." This brings afresh to my mind what I heard at Auburn, and so I think it might be well to say a few words in the matter.

Regarding the ventilation matter, I much prefer to make the entrance large enough to give all the needed ventilation in times of extreme heat, and have it so arranged that it can be easily contracted to meet the requirements of the smallest colony when desired. My reasons for so preferring are that, the bees get a habit of using this ventilator for an entrance, so that, when it is finally closed, the bees which have been accustomed to use this as an entrance to the hive, go out at the regular entrance, but return to the old place only to find it closed, thus causing a great commotion and loss, as they know of no other place of getting into their home, having so marked on their first flight. And, worst of all, unless the rear entrance is closed during cool nights, it makes the hive so cool by the draft of air thus caused, that the bees cannot work to advantage at comb building or evaporating nectar.

As to an entrance into or near the surplus apartment, anyone arguing that such is a necessity shows a lack of a thorough knowledge of the inside workings of the hive. And also, such entrances retard work on cool nights in the same way, or even worse, than does a rear entrance, as spoken of above, and should never to tolerated for this reason, if for no other.

When I first began bee-keeping I used an entrance just under the supers to my hives, and after a little while began plugging them up, and found that those plugged did much better in surplus than those open, which resulted in the plugging of all, in hives already made, and in making no more such entrances in new hives. But why did I say above, that such an entrance showed the lack of a thorough knowledge of the inside workings of the hive? Because the bees which gather the nectar from the fields are not the ones which deposit it in the cells, as I have several times proven by taking away a queen of one variety of bees and introducing a queen of another variety. For instance, I once took away the queen of a black colony in June, and noted the time the last black bee emerged from its cell, and also when the first Italian bee came forth from its cell. As young bees do not gather nectar till they are sixteen days old, where the colony is in a normal condition, on the fifteenth day after the first Italians emerged from their cells none were seen going in and out at the entrance but black bees, while an examination of the surplus apartment, in which the bees were briskly at work building comb and depositing honey, showed scarcely a black bee there, but all were Italian. And this is only one instance among many which have proven the same thing. Consequently I am opposed to more than one entrance to any hive, under any circumstances, or at any time of the year.

Borodino, N. Y., Aug. 2, 1902.

HONEY VS. SUGAR.

A Comparison of the Relative Food Value o These Commodities.

(Bessie L. Putnam).

CHILDREN hanker for sugar, although it has long been regarded as a delicacy of doubtful propriety. In the form of candy, however, it was indulged in with more or less liberality as the purse and the rules of hygiene dictated. That it was harmful was believed by many; the idea that it possessed any special food value would have been scouted a generation ago.

Since it is one of the most commonly adulterated foods, promiscuous use of manufactured candy cannot be recommended. That of home manufacture, however, has been shown to be not only wholesome but a necessary food. The carbonates essential to perfect physical development are found in sugar as well as in meat, and in the former much more easily assimilated.

Statistics show that civilized nations are each year using more sugar and less pork, and the substitution proves a healthful one to the purse as well as to the body. The average consumption by Americans is 63 pounds annually by each man, woman and child. Our own nation is credited as containing the greatest sugar eaters, after which come the Danish, Swiss, Dutch, French Germans and Swedes. The nations of Southern Europe indulge less freely as their warm clime permits of less heat-producing foods. "Generally speaking," says a recent writer, "sugar is one of the indices of national progressiveness; the more enterprising and energetic a people, the more sugar they eat."

It is generally conceded that honey is much more easily digested than sugar; in fact, it is sugar partly digested. The virtues of the latter all exist in a simpler form,—and to most people in a more delectable one,—in the product of the hive.

Says T. G. Newman, "It is nature's offering to man—ready for use, distilled drop by drop in myriads of flowers, by a more delicate process than any human laboratory ever produced." Almost every one likes it, and the fact that comparatively few can indulge in it on account of the price should render every bee-keeper appreciative of his privileges. As to the cost, there are two ways of looking at the matter. With the market price alone in view it seems a little extravagant to substitute honey for granulated sugar which is sold for half the price; on the other hand, the honey is converted from nectar which would have been lost but for the bees. It really costs the owner of the hive but little save his labor, and may be regarded as largely an inexpensive way of converting unavailable material into the choicest food.

A tourist calls attention in Gleanings to the fact that chocolate, coffee, rolls and honey are a staple breakfast menu throughout the continent, including Holland, Belgium, Germany, France, Italy, Austria, and Switzerland. Sometimes marmalade is substituted for the honey, but meat is not indulged in, the extracted honey, which is used entirely, furnishing necessary fuel.

Cake, candy, pudding, all culinary products requiring sugar are more wholesome and in many instances more appetizing by a substitution of the honey. The cereals used as breakfast food have a delightful flavor all their own when sweetened with honey, and all that has been said advocating the use of sugar applies more emphatically in the apiary. If it causes "honey sickness" try scalding a small quantity.

Just imagine for a time that it is made from left-overs and see how fast it will grow in popularity. Use it freely as a food, rather than a luxury.

Harmonsburg, Pa., July 30.

BISULPHIDE OF CARBON.

Closed-End vs. Hanging Frames—Old and New Combs.

(F. Greiner).

IT HAS been said that the bee-keeper who does not use carbon bisulphide for destroying waxmoth larvae is behind the times. I am not fully convinced of this. Mr. E. R. Root now advises in Gleanings, to use the drug out of doors only, for safety's sake, for the gas formed by evaporation is very explosive.

If other bee-keepers do as I do, they store honey and combs inside of their buildings, shops, honey houses, etc. Do I now understand that I must set all this out in order to have the privilege of being up to the times? That would be paying dear for a questionable privilege. It would be simpler and cheaper to keep on using sulphur inside without moving a full super of honey or a hive body full of combs. My way of doing is to store my honey and combs in the supers 10 or 12 high.

When I deem it best, or find it necessary to do something to stop or prevent the work of moth larvae I place an empty hive body on top of a stack of combs or honey. This leaves room for a four-quart pail which I partly fill with ashes. A small quantity of live coals are placed upon this every time a stack of honey is to be sulphured and a handful of sulphur is burned on top of each stack. Of course, all has to be covered up tight and left thus for half an hour. As is the case with carbon, the sulphur fumes settle and fill the whole stack of combs or honey and kill moth larvae.

I do not find it necessary to sulphur comb-honey more than once. The use of too large a quantity of sulphur causes comb honey to turn green in spots, particularly along the edges where the comb is attached to the section box. Care is required to avoid this.

CLOSED-END FRAMES.

In the same journal it appears that some German authorities pronounce our modern hives illy adapted to the needs of the honey bee. The passage ways between the combs,they say,should form closed chambers, and the combs in the brood-nest should be continuous planes uninterrupted by wooden bars and bee-spaces, as in shallow sectional hives. These defects have been harped upon by Dzierzon for nearly half a century. A few American bee-keepers have also pointed out the same features as being detrimental to bees.

Perhaps it is possible to construct a hive possessing the features peculiar to the box hive, and still have the combs readily movable. The closed-end frame was devised probably to accomplish this object. I myself have been inclined to the German view. To test the matter I built about twenty-five closed-end frame hives, quite a number of years ago. The frames were eleven inches deep. I cannot remember how many years I had them in use but I finally discarded them for the more convenient loose hanging frame and others of similar construction.

In comparing the closed-end frame hive with the other as to wintering, breeding up in the spring, etc., I have about concluded, that the difference in these respects is slight. If the former has any advantage. It is not to be compared with the advantage the latter has in respect to greater ease and rapidity in manipulating; but supposing there was a marked difference in favor of closed-end frames, I have this to say: Myself as well as the great majority of bee-keepers keep bees not for the sake of the bees, but principally for the profits from the business; or, in other words, to make a living.

Any method or any devices which give the greatest profit with the least labor, we are in for; even should the bees have to suffer. Of course, the bee business could not be carried on successfully very long unless the hives used met the requirements of the bees. About this there can be no doubt. But I believe the bad effect claimed resulting from the use of open-top and open-end frames is nearly if not quite counterbalanced by improved methods of wintering and the improved features of our modern hives.

OLD VS. NEW COMBS.

It is claimed by some authorities that bees prefer old comb to new, other things being equal. I have never seen evidence of this. What I have observed of late seems to point the other way. When it became apparent that the colony containing one of my breeding queens made preparation to swarm I removed the queen with two brood combs and adhering bees, thus forming a nucleus colony. I gave it two extra combs one at each side, and after a week's time an empty frame at one side. One comb was promptly occupied with brood, and I expected the other would be also; but instead, the empty frame was being built out. Evidently the bees seem to think new comb, even if it has to be first built, is better or more to their liking than the old, but good comb at the other side of their brood nest.

Naples, N. Y., July 13, 1902.

QUEEN REARING.

"Swarthmore" Demonstrates His Method Before the Philadelphia People.

(M. F. Reeve).

THE NOTED queen breeder, E. L. Pratt, gave the Philadelphia Bee-Keepers' Association a clean-cut talk on queen rearing in artificial cell-cups by improved methods, through a paper read by Secretary Hahman, at the outing on July 20, at Vice-President Flower's apiary, Ashborne, Pa.

The distinctive feature of Mr. Pratt's plan is the rearing of queens in minature hives, either isolated or over strong colonies.

Nothing would do then but that Mr. Pratt should give a practical illustration of his manner of transferring larvae from combs to cell-cups, which he proceeded to do. He had brought a press and empty shells or cups, along with him. Mr. Flower provided wax and a cup and oil stove. Melted wax was poured into the cups and when it had hardened, the cups were placed under the press and given a stamp, and were ready for the larvae. Mr. Flower opened a hive and took out a comb with eggs. Mr. Pratt fashioned a sharp-pointed stick inserted it in several cells, pulled out the larvae and deposited each in a cup and the cups in a frame and the frame was put back in the hive for the bees to finish out the drawing of the cells and to do the rest. The visitors were taken into the apiary and were shown frames containing larvae which had been inserted by Mr. Pratt at his home place just a week previously and had been accepted. Some of the drawn cells provoked exclamations of surprise on account of their great length.

Mr. Flower also exhibited his improved tent with which he is conducting experiments on the mating of queens in confinement, a subject on which he spent considerable time last year, and the results of which were embodied in a paper read before the Bee-Keepers' Association last winter.

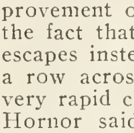
By the way, I omitted in my hurry last week to mention the fact that at the Mt. Holly meeting, Mr. Hornor showed a new bee escape which he said was a Canadian invention and had been exhibited at the Pan-American Exposition. It was claimed to be a big improvement over the ordinary escape in the fact that there were nine separate escapes instead of one. These were in a row across a board, thus making a very rapid clearing of the supers. Mr. Hornor said the bees went down in "no time," being attracted towards the light, which was admitted through screen clothing on the edge of the board. He said the drones would not "ball up" or obstruct the escape.

Rutledge, Pa., July 20, 1902.

A VERMONT BEE-KEEPER.

One of Our Regular Contributors Has a Pleasant Visit to the Green Mountain State.

(A. C. Miller).



AMONG trees and shrubs, picturesquely scattered, well up on one of Vermont's green hills lies the apiary of E. L Bragg. It was my good fortune to call upon him one afternoon in mid July, and my reception was most pleasant.

Mr. Bragg has 50 or 60 colonies all in the original type of Langstroth hives, with portico and cap. Also his bees contain the blood of the strain of Italians first sent out by Mr. Langstroth, Mr. B's father having purchased some of the stock. Today his yard contains only hybrids, but Mr. B. says the vigor of those Italians is still apparent. He has tried some other strains but only to discard them, finding his hybrid stock better fitted to his needs. He follows the simplest methods possible as his large farm calls for much of his time, but the results speak well. Natural swarming is allowed, and swarms are hived on the old stands, but instead of using only starters in the frames he says he finds it profitable to have part of them filled with comb. His surplus arrangements were an illustration of how location modifies practices. Instead of putting on a full case of 28 boxes he finds it better to have his cases contain but 14, and one of these he first puts across the rear part of the frames; later another case covers the front part, and as work progresses ordinary storifying is practiced. Mr. B's main crop of white honey comes from raspberry, vast quantities of which are within reach of his bees.

He winters his bees in the cellar, but often does not put them in until the middle of December. He says that if they get a chance to fly once in December they will winter all right, but otherwise they often suffer from dysentery. In the spring he does some feeding and says he believes it pays, but I inferred from some other remarks that as yet he is only trying it experimentally.

He produces a nice grade of honey, puts it up in cartons and ships only the well filled boxes, saying the others break out in transportation and that he can sell such just as profitably at home. Together with many another bee-keeper he has this season gotten little more than his labor for his pains, the crop having been very meagre, and several swarms had to be fed to keep them alive.

Providence, R. I., Aug. 6, 1902.

AUTUMN SUGGESTIONS.

Preparing in the Fall for Winter and Spring.

(L. E Kerr).

BEES USUALLY receive but little attention after the close of the honey season; and this is well enough, providing all colonies are all in first-class condition; but, if not, then we should not neglect to do the work necessary to make them so.

Bees, perhaps, are better off when not unnecessarily handled in autumn and late summer, and especially so if much smoke is to used upon them to bring them under subjection. If they have an abundance of honey in the hives so that stores are no object, it will then do no harm, but frequent handling will increase their food consumption, and perhaps will be but little benefit in stimulating their queen to laying.

If queens are to be introduced to colonies, it should be done early in autumn, so that every colony will be in good housekeeping shape before winter. Queens introduced in early autumn will begin laying and will produce young bees which are very essential to the welfare of the colony, and by the time winter is on they are in good condition to winter, if they have plenty of stores. If bees lack stores and are to be fed, this also should be done early, giving them warm weather to store and seal their honey. Early feeding will also incite brood rearing and a quantity of young bees will be hatched, while late feeding will not have this effect.

The surplus boxes should be taken off all the hives thus early, unless a good honey flow is on, when the bees may be working in the boxes; but only in very rare cases is it best to let them store honey in the surplus boxes at this season of the year, but better to have all honey now stored in the brood chamber for the bees to winter on and carry them through until the next season. We should always leave enough honey in the hives to "spring" the bees, as well as "winter" them.

Bees consume honey more heavily after spring opens and brood rearing begins; and at no time in the whole year will it be more important to keep them supplied with a good reserve store.

Hurricane, Ark., Aug. 2, 1902.

White Clover.

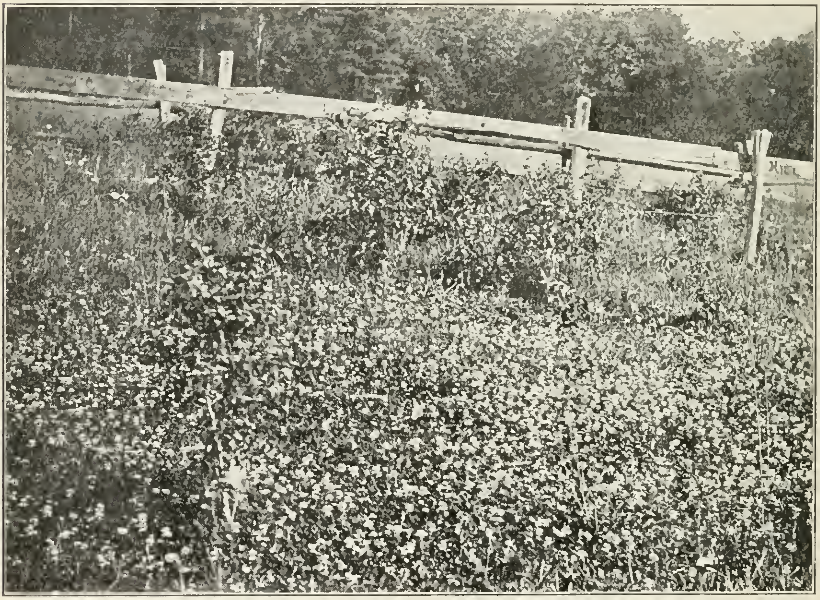
(H. E. Hill).

THE accompanying picture reflects a scene with which every dweller in the clover belt is familiar; but there are thousands of Bee-Keeper readers whose knowledge of this great honey producing plant has necessarily been restricted to that gleaned from the pages of books and magazines, having not been permitted to observe the busy workers actually jostle one another in their eagerness to secure the nectar from its tiny corollas. It was taken by the editor of The Bee-Keeper as he strolled, several years ago, among the hills of Western Pennsylvania.

"O country lanes, white-starred with bloom,
Where wild things nestle, shy and sweet,
Where all your waving grasses laugh
And part before my eager feet."

Of white clover, a popular encyclopedia well says: "The flowers of all kinds of clover are the delight of bees, but those of this species perhaps particularly so." It might as truthfully have been added that in all the floral realm no more delicate and delicious nectar is offered the eager gatherers, nor sweeter perfume wafted from the rose, the "queen of flowers," than that which greets the admirer of nature who wanders among fields of white clover on a June morning.

Fort Pierce, Fla., Aug. 18, 1902.



Sample copies are still free, and it's a pleasure to submit them to those who request it. Ask for as many as you can use to advantage.

After having read this number of The Bee-Keeper, if you decide that it is not worth four cents—about its cost—please tell your bee-keeping friends that the paper isn't worth it. Tell them truthfully what you think; but be sure to tell them something about it.

As a special inducement to new subscribers, we offer this month to send The Bee-Keeper six months on trial for twenty (20) cents. Will our friends kindly make the fact known to bee-keepers of their acquaintance who are not taking The Bee-Keeper?

As we think a comparison will show, The American Bee-Keeper prints a greater quantity of original matter than any other monthly bee journal in the world, while if there is one published at a lower price, we have not seen it. Many cost twice as much, and they are worth it. Please ask your friends to give The Bee-Keeper a six months' trial. The cost is 20 cents.

A laugh is worth a hundred groans in any market.—Charles Lamb.

THE
Bee-Keeping World

AUSTRIA.

To find a queen bee Zeiler advises, in Bienenvater, Vienna, to hang the brood-frames with adhering bees in pairs upon an open, purposely constructed frame (comb-horse-Wabenbock). In a short time uneasiness will be manifested by the bees upon those combs not having the queen on them. The bees that have the queen with them will remain quiet. The finding of the queen will then be easy as but two combs have to be examined.

SWITZERLAND.

Honey is usually served for breakfast in the hotels of Switzerland. In regard to this custom "Die Weltauf Reisen" has this to say in substance: It has been observed that honey gives strength and endurance to the travelers who climb the mountains, which explains why honey is served. Wheelmen would do well to indulge freely in honey.

IRELAND.

An organization of bee-keepers has been organized in Ireland. Its main object is to effect the sale of the honey of its members, also purchase supplies. It is said the bee-keepers have realized nearly 50 per cent. more for their products. The seat of the organization is Dublin, its officers are elected annually.

GERMANY.

As regards the problems before bee-keepers of the 20th century. Valentin Wuest suggests rather ironically in Deutsche Illustr. B. Z., that there are some other things besides long tongues and short tubed blossoms to be worked for. He enumerates: Enlarging of the honey-sack of the bee to enable her to carry larger loads; Nubbing off the stinger of the worker to prevent its penetrating the human or animal skin; Increasing the honey-secreting propensity of the blossoms. Electricity properly applied might be a factor of consideration in this last named matter. When successful in all the above, results might be greatly increased by illuminating earth's honey fields by electric lights to keep the industrious insect everlastingly at gathering honey, night and day. Finally hypnotizing of the bees in the fall of the year, so they will pass the winter sleeping and without taking food.

Deutsche Bienenfreund has the following criticism about judging honey at fairs: "It is a common practice for a judge to go from exhibit to exhibit with a spoon, a pencil, a penholder, a jackknife or key, dip into one kind of honey and lick off the instrument used, then dip into another kind of honey and lick off again, etc., etc. The judge may be a perfectly competent man, but it cannot be known whether he is in good health or not. If he is not, licking off the instrument used and dipping into other honey afterward may infect the different honeys with disease germs. A practice of the kind cannot be too strongly condemned No one would think of putting his knife, fork or spoon after being used by him, in contact with another man's food at table. If he did, he would be considered an uncivilized person who does not know even the first principles or elementary rules of decency and cleanliness. Why should such or a similar course be admissible when judging honey or butter, jellies etc., at fairs?" We have a cheap and suitable little instrument, which would answer the purpose of taking up honey for sampling, even from the cells of nice comb honey, in the shape of a little glass tube drawn to a point at one end and a rubber bulb attached to the other. It is the implement we use in taking up ink for filling fountain pens. This tool should of course, never come in contact with one's mouth while at work judging, but the liquid taken up should be deposited in a spoon or in absence of such upon a card and thus conveyed to the mouth. I could suggest other ways: Little wooden splints for instance to be thrown aside after sampling each kind of honey, etc.

A writer in Deutsche B. F., suggests to breed drones for trout-food. He says a good profit could thus be made. He thinks from 20 to 40 pounds of drones could be raised by one colony, which in turn could be converted into 10 to 14 pounds of trout meat.

In the same paper it is said that young swarms are most valuable when issuing at the beginning of a good honey flow; and that the truth of the old addage, "a swarm in May is worth a ton of hay," etc., has long been exploded. Just so.

The Leipziger B. Z., reports that the Arsenic Factory at Marfritzdorf distributes death and destruction among bees of that locality every year. The escaping poisonous fumes leave a deposit of arsenic upon all vegetation. With the pollen and nectar the stuff is thus carried to the hives. In feeding the young with it they die in large numbers.

E. Stoerzer, in Schleswig Holstein B. Z., says it should be a matter of honor for every bee-keeper never to offer unripe honey for sale. Honey is not ripe till it is sealed.

For the common bee-keeper the best way of rearing good queens is to accept a good lot of after swarms. Wurth in Die Biene. F. Greiner.

The Seasoning Series

By Deacon Hardscrabble

Dear Bro. Hill:—

Don't you worry about your lapsing into that spirit of lethargy which follows inaction, otherwise called "loafing." A chap who edits a paper, runs a pineapple plantation, a bee farm and a small boy, don't often have such things happen to him. However if you really fear such a state, run over and see me and I will let you wrestle with some "choice finely marked Italians" that I have. As they are really four-fifths Syrians you can guess near about their heat. They'd be good up North next winter to keep folks hot during the coal famine. Strange how india-rubbery some of the boys' consciences are, to work Syrian blood into their Italians to get color and then call them pure. Heard a man swearing a blue streak over such bees t'other day. Couldn't help but admire him even tho' I felt constrained to quote the old Quaker's remark to the angry teamster: "That's right my friend, swear away and get all that vile stuff out of thee." What shall we say of and to the men who cause the profanity?

Now Bro. York has done joined Bro. Root in the explainin' line. Says he leaves the address off of articles so the dear contributors will not be bothered by correspondents. I reckon he leaves the dates off for the same reason.

Say, a most impertinent cuss (yes I mean "cuss," that just fits) blew in on me near a week ago, and say sir, he just criticised nigh about everything I had—even my tobacco after he'd borrowed all I had about me. Said things unprintable about those "Italians" and left without saying good-by—but then, he was hardly to blame for that, for those bees seemed to take a likin' to him. 'Bout half the colony followed him out of sight. I wonder if I hit that hive while he was admiring them?

It's mighty queer how some people are always criticising everything and everybody; ain't it? I can't understand it. Now there's one of the boys out in Colorado who is great in that line; keeps himself in hot water most of the time—I understand he don't like hot water, either. Then there is another "boy" in York state who can't agree with nobody nohow unless they believe in him. Deucedly odd. Then in Tennessee is another fellow who gets everybody all mixed up on hereditarial laws and is cock sure the other boys are away off. Gee whiz! Say, the woods are full of them. But most reckless of all, is our old friend Dr. Gallup: why he's just gone and slapped the faces of every queen raiser in the land. Says all their queens are degenerates. Seems as how a boy of his years ought to know better than poke sticks into such a hornet's nest. Just won't he catch it. I opine he is right certain of his ground tho'; he generally is before he makes statements.

Didn't I tell you that ructions were coming, be more of 'em too, see if there ain't. Here is food for some of them: "Mr. G. apparently saw only one side or a part of the other side. If he will withold judgement until he receives a full statement I think he will see the matter in a different light." So wrote E. R. Root on the National Managership muddle, in the A. B. J. July 31 1902 P'r'aps E. R. R., while he is in the explainin' line, can explain to the membership why they do not receive a "full statement" and that before the next election.

So Dr. Miller wants me to say which of you are right. Faith and ye are both right and both wrong. It all depends on whose bees ye are talking about. The pure Italian is a mighty scare bird among domestic ones now-a-days; most of 'em have Syrian blood.

Now both of ye go and get Cyprians and be happy.

Yours as ever,
John Hardscrabble.

BEE BREVITIES

In the Bee-Keepers' Record for July, twenty-seven bee and honey exhibitions are scheduled to occur in England from July 5 to October 10, inclusive.

"The great secret of successful bee-keeping lies in having strong colonies always ready to gather surplus whenever a good honey-flow comes."—British Bee-Keepers' Guide Book.

Mr. Charles Dadant, of the firm of Chas. Dadant & Son, Hamilton, Ill., a respected and prominent figure throughout the bee-keeping world, died at his home, July 16.

The Central Association of Austrian Bee Keepers have arranged for an international exhibition of bees, supplies, honey and apicultural literature, at Vienna, during the festival of Easter, 1903.

Editor Morehouse, of the Rocky Mountain Bee Journal, on June 11, lost his beloved father, Thomas H. Morehouse, aged about 62 years. The sympathies of the fraternity are with the bereaved brother.

J. W. A. inquires: "Do you think I can raise as good queens by his (Alley's) plan as by any of the others?" Yes. There is no apparent reason why they should not be fully equal to queens reared by any known method.

It has been proven by various tests that more depends on the nourishment supplied for the first two or three days than is generally conceded. not only by the longevity of the queens and their offspring, but their prolificness as well. —W. H. Pridgen, in Gleanings.

One word about ripe and unripe honey. It appears that much depends upon the season—upon the honey flow—as to whether there will be much unripe honey. Much wet and cloudy weather is conductive to there being unripe honey in the hive.—Prof. Shutt.

It is an interesting fact that in honey we are dealing with a substance which has been an article of food from prehistoric times; for ages and ages before Christ it was the only form of sugar known to the world.—Address of Prof. Shutt, before Ont. Bee-Keepers' Ass'n

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It has been said that those who put unripe honey on the market are as bad as others who adulterate, and so they are. Away with all those who extract and sell unripe honey. Nothing will discourage the consumer of honey as will eating this unripe stuff.—G. A. Deadman, in Canadian Bee Journal.

Mr. J. T. Hairston, Salina, I. T., writes that the present season has given him the first fairly good honey crop in three years—50 pounds, comb, and 75 pounds, extracted per colony, spring count. Bees elsewhere in the Cherokee Nation, however, have not done so well. Prospects are fair for a fall flow, also.

Under date of Aug. 10, Mr. F. L. Powers, Groton, N Y., who is one of W L Coggshall's staff of apiarists, writes that the season has been so exceedingly wet that the honey crop is short, only about 10,000 pounds of white clover honey having been secured from the nineteen apiaries operated in New York state

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The British Bee Keepers' Record for July devotes its editorial space to a discussion of the King's indisposition and expressions of gratitude for his recovery. It says: "To occupy this column with such commonplace matters as bee work, or writing of the season's prospects, would be singularly inopportune at this time."

To such an extent has the Arkansas Valley, Colo., been overstocked that the bee-keepers' association of the same name has taken official steps to restrict further introduction of bees from other sections. As a result of overstocking the ranges it is said the average honey crops of recent years have been reduced fifty per cent.

James Heddon, author of "Success in Bee Culture," inventor of the hive which bears his name, and for many years a beacon light in American beedom, is now distinguishing himself in the realm of sports; having invented an especial bait for alluring the wily black bass, and being now engaged in writing a book upon the same subject.

"I have to record that I did not get a half-dozen stings during the whole season, until today, when I think I got my supply all at once from a strange stock I ventured to look at. The owner afterwards informed me that the bees were 'Russians." It struck me at the time that they were something out of the usual."—H. W. Brice, in Bee-Keepers' Record.

A New England correspondent dwells at length upon the great importance of early preparation of bees for winter in his latitude. He says: "In this part of the U. S. a full storehouse in September means good wintering, perfect 'springing' and big colonies for the harvest next season—if the queens are good." The necessity for this preparation is by no means confined to New England. It is important in the South, as well.

Pat, the stalwart hustler who came out of the East to "star" for a season or two before retiring. on America's apiarian stage, is dodging about like "a bee in tar-bucket," these days, making preparations for the move to Cuba—not with the 800 colonies originally planned, but with 200—and we must repeat the advice to "the Cubebs in Cuba," as Josiah Allen's wife would say, to meet him at the Havana wharf in September and then and there annihilate the whole outfit, or peacefully surrender the island to him.

Now, if those scientific bee men can and have bred up a strain of bees with an unusually lengthy tongue, why on the same hypothesis, can't they breed up a strain with a short stinger? If I were in the queen rearing business I would advertise my bees as having unusually short stingers, and an unusual inclination not to use them, and I would get the trade, too. These bee experts, no doubt, know what they are about; but I think for solid comfort they are working on the wrong end of the bee. —J. R. Gray, in Rocky Mountain Bee Journal.

As ever yours,
W. Z. Hutchinson.

(President National Bee-Keepers' Association.)

SECCIÓN ESPAÑOLA.

"The American Bee-Keeper" se envia á principio de cada mes. Si por algun motivo el suscritor no recibe su periodico á su debido tiempo, sirvase notificarnos y les enviaremos otro ejemplar.

Todo asunto relacionado con la Dirección y subscripción á este periodico, debe enviarse á "The American Bee-Keeper, Fort Pierce, Florida. El dinero puede remitirse por giro postal. El giro puede hacerse á The W. T. Falconer Manufacturing Co., en Jamestown, N. Y., cuando convenga más á los marchantes de esa casa.

Cuando el suscritor reciba el periodico con una faja azul es para avisarle que su subscripción termina con ese ejemplar. Esperamos ser favorecidos con orden para continuar la subscripción. Rogamos á nuestros corresponsales escriban los nombres y direcciones bien claro para evitar demoras.

Una faja roja indica que se debe la subscripción y esperamos su pronta atención al particular.

Subscripcion: 50 centavos al año.

LAS PICADAS DE ABEJAS.

El Dr. Sere, de Marburg, ha tratado casi un centenar de reumáticos por medio de las picadas de abejas, habiendo llegado á las siguientes conclusiones: El veneno de la abeja conviene para toda clase de dolores reumáticos. En las afecciones agudas y poco graves, el efecto es rápido y la curación viene tras un corto número de inyecciones; los casos más graves y crónicos exigen á veces centenares de picadas. En los casos ligeros ó recientes, la curación por las abejas ha de preferirse á todas las demás; para los casos más graves, no se ha de recurrir á esas inoculaciones por las abejas sino cuando los medios usados generalmente han resultado ineficaces. Las complicaciones numerosas de estas afeciones, su duración prolongada, denotan un mal grave, inverterado, que exige imperiosamente el empleo del veneno de las abejas. Hasta cuando llega á presentarse una especie de consunción, en que todos los demás medicamentos son ineficaces ó no ocasionan más que una mejora pasajera, la cura por las abejas proporciona una curación radical. Sólo que no ha de perderse la paciencia y continuar las inyecciones tanto como duren los accesos. A pesar del dolor local provocado por las picadas, prodúcese un gran bienestar, notable consuelo ya antes de la desparición de la enfermedad, y esto basta para quitar el temor de las inoculaciones y para levantar el estado moral de los enfermos.

(Prager méd. Worchenchrift).

LA PIQUERA.

La piquera ha de estar al nivel del tablero por las razones siguientes:

a) Las abejas tienen más facilidad para arrastrar al exterior los cadáveres, los deshechos de todas clases, cuyo amontonamiento vicía el aire de la colmena y ofrece un refugio á las polillas, á los piojos y á otros enemigos;

b) La renovación del aire se verifica mucho más facilmente; el ácido carbónico, más pesado que el aire, cae sobre el tablero, se escapa por la piquera y no incomoda á las abejas, sobre todo en invierno;

c) La vigilancia de la puerta se hace más eficaz, las guardianas están en mejor posición para recibir convenientemente á las ladronas;

d) La ventilación, durante los calores estivales, es más activa; el número de ventiladoras y la disposición de ellas hacen más rápida la renovación del aire y permiten evitar una elevación de temperatura que ocasiona á veces el hundimiento de la reciente obra.

Existen, sin embargo, apicultores que prefieren la piquera situada á alguna distancia del tablero.

(Praktische Wegweiser).

POBLAR LAS COLMENAS DE CUADROS.

Muchas veces se ha dicho: "Para poblar una colmena de cuadros, no os contentéis, pues, en alojar en ella un pequeño enjambre de colmena vulgar, porque no podrá obrar sus panales ni recoger suficientes provisiones; poned dos, tres, cuatro enjambres, de manera que haya unos 4 kilogramos de abejas en la colmena, y haced esta operación lo más pronto posible."

A pesar de este consejo, tantas veces repetido, hemos visto todavía, en octubre último, hermosas colmenas de las que se esperaban maravillas, no contener sino cinco ó seis cuadros obrados, algunos kilogramos de miel y un puñado de abejas.

!Se ha querido tener demasiado pronto un colmenar importante, se ha cometido la mayor falta que un apicultor pueda cometer, y, en primavera, ante la colmena vacía se ha maldecido de las colmenas de cuadros!

(El Colmenero Español).

PARA REUNIR ENJAMBRES.

Para añadir enjambres á otro ya alojado en cuadros, ha de ahumarse este último convenientemente, al obscurecer, con humo de tabaco. Transcurridos cinco minutos, se destapa los cuadros, entre los cuales se proyectará también un pocode humo, luego, de un golpe seco sobre el vaso que contiene el enjambre que ha de añadirse, se hará caer éste encima de los cuadros que se cubrirá diligentemente con un lienzo.

Una hora después se pondrá la tapa y al día siguiente se reemplazará el lienzo por la manta ordinaria.

(Rucher Belge).

AL COLMENERO.

Ten compasión de la abeja
cuando vengas á castar,
no le vayas á quitar
hasta llegar á la teja.
No quites ni aun cera vieja,
y trátala con cordura,
que si te lleva la usura
a quitarle lo que tiene,
en el invierno que viene
su muerte será segura.

Toribio Martín, en El Colmenero Español.

There is nothing so powerful as example. We put others straight by walking straight ourselves.—Mme. Swetchine.

IMPRACTICABLE.

Jones—"Good morning, Mr. Brown; I've come all the way from Kalamazoo to find out what to do with my queenless bees. It's too late to raise a new queen this year; and I'm in a peck o' trouble. I don't want to lose 'em, and knew you'd know what is best."

Brown—"Unite them with—"

Jones—"Hang at all! that's what a lot o' folks have told me, and it ain't practicable. How's a fellow 'goin' to—"

Brown—"There's no difficulty about uniting bees if—"

Jones—"I tell you it can't be done, because—"

Brown—"What's the use of asking advice then, if you know it can't be done?"

Jones—"Because I ain't got but one hive."

Orange blossoming begins here the 1st of March and continues up to the 1st to 15th of June. While in bloom the whole atmosphere is scented with perfume, which accounts for the hundreds of tramp swarms flocking into the vicinity of orange orchards this season; outside there was nothing for them to gather. By the way, I was up to the orange packing house one day when they had just loaded a car, and a swarm flew inside, and the agent closed up the car; the engine hooked on, and they started on the road for Chicago.—Dr. E. Gullup, (California) in Am. Bee Journal.

He is a wise man who wastes no energy on pursuits for which he is not fitted.—Gladstone.

¡MIRA! ¡MIRA!

Tenemos una lista completa de los apicultores de la Provincia de Santa Clara, pero quisieramos poseer los nombres de todos los apicultores de Cuba. A todo aquel que nos envié una lista de diez apicultores, fuera de la Provincia de Santa Clara, mandaremos el American Bee-Keeper un año entero gratis. tf

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A red wrapper on your paper indicates that you owe for your subscription. Please give the matter your early attention.

Editorial

This is the month to "cure" spring dwindling.

No man who is not a thoroughly practical apiarist should be considered for general manager of the National Bee-Keepers' Association.

As a candidate for general manager of the National Association, the name of Mr. N. E. France, Plattville, Wis., State Inspector of Apiaries, has come to us from several sources. We doubt if the United States can supply a more capable gentleman to succeed Mr. Secor.

Undoubtedly the largest straw hive, or skep ever made is the one constructed in Ireland for use as an exhibition building at the Cork International show. It stands twenty feet high and was illuminated by electric lights. We have a photograph of this monster "skep," and will soon present it in these columns.

We have pleasure in presenting in this number the latest and best photograph taken of President W. Z. Hutchinson, of the National Bee-Keepers' Association, which convenes at Denver this month, from the 3rd to 5th. Whether at conventions, as editor or author Mr Hutchinson is a tireless toiler for the welfare of beedom; and no man living today is held in higher esteem by the fraternity. The likeness shown was taken and engraved especially for The American Bee-Keeper.

There exists among the leading bee-keepers of this country a very admirable degree of friendship. It is, doubtless, for the good of the industry that this spirit should be maintained; but is it the part of wisdom, or prudence for promoters of the National Association to permit their social regard for any member to influence their labors in the cause of advancement, to the obvious detriment of the enterprise and the injury of every member, simply through fear that the feelings of some one individual may be harrised? As it appears to us, it is hardly worth while to cultivate the friendship of any one who is disposed to take offence at courteous, candid statements, even though they should run to some extent counter to his wishes or aspirations.

Do not begrudge the bees sufficient honey for their needs during winter and spring. Leave them enough and to spare; that which is not consumed is not wasted. It is evidently an encouragement to the bees in spring to have even more than is needed for brood rearing—and a large amount is absolutely essential. Twenty pounds may carry the colony through the winter months, but the bee-keepers' chance of success next year is largely increased by leaving 50 or 60 pounds. One hundred pounds per colony would be no detriment to the bees; so it is well to be on the safe side. Some one reported the Dutchman to have said, "Too much peer is shust enough." He probably never said such a thing; but, in the preparation of bees for winter, we do not hesitate to paraphrase—Too much honey is just enough.

In this number, Mr. Henry Alley, the veteran queen breeder of Massachusetts arrays himself in a very positive manner against the use of artificial cell-cups in the rearing of good queens. It may be interesting information to many of our readers to learn that Mr. E. L. Pratt, to whom Mr. Reeve refers also in this issue, and who is an enthusiastic advocate of the cell-cup method, is a student of Mr. Alley's. It is well to take ample time, and even to experiment to some extent ourselves before definitely drawing conclusions in all matters up for discussion in the journals. Good men differ widely in opinions in relation to the most ordinary subjects. With direct reference to the matter in question, it it not improbable that it shall become very generally settled in the minds of bee-keepers before the lapse of many years, and, as a logical result of its final settlement, those of either one or the other of the present schools must stand accused of having tenaciously held to their false premises, either through prejudice or ignorance. The merits of the product of the two systems will ultimately decide who are the victors—who were right and who, wrong.

Mr. Geo. W. York, editor of the American Bee Journal, has repeatedly and emphatically declared that no editor of a bee paper should hold the position of general manager of the National Association. Mr. York displayed wisdom in such a stand. We believe he opposed Mr. Hutchinson at one time, quite strongly, upon this ground. It appears, however, that from Mr. York's view point, it makes "all the difference in the world" who the "editor" is. It seems that an "editor" of a self-styled "Old Reliable," should be an exception to the rule; for one of Mr. York's personal friends in Chicago (without Mr. York's knowledge, of course) has nominated the "Old Reliable" editor for general manager,and it was anticipated that said nomination would "raise a breeze with Mr. York." It did; but instead of being an invigorating, health-giving zephyr in support of his expressed convictions upon this point at a time when another "editor" was being considered for the place, it came with stifling and suffocating effect, like a blast from Sahara. With an attitude of submission to the will of the people, which under other circumstances might appear commendable, Mr. York asserts his will to labor where he is wanted by the majority. "Consistency, thou art a jewel."

Occasionally some of our readers—readers who have long since mastered the ordinary routine of practical apiculture—think it necessary to remind us of the fact that space is given to the discussion of subjects very generally conceded, or that trifling things take up space which might better be devoted to the weightier questions, in which direction their interest lies. We would kindly ask all such to bear in mind that the current year has been ordinarily productive of young bee-keepers, hundreds of whom have subscribed since the beginning of the year for The Bee-Keeper. In the selection of material for these pages we strive to meet, as nearly as may be, the wishes of the diversified tastes, or needs of our patrons. Have those who fail to appreciate the varied demands made upon such a publication, so soon forgotten the first year of their own bee-keeping experience; when these unimportant items were so eagerly read and relished? Sometimes one who is just learning to take his first step in apiculture is inclined to think his case is neglected, and complains that there is too much that he cannot understand. He, also, should bear in mind that there are those who have been gleaners in the field of apicultural knowledge for many years, and that in addition to the visible sheaves of the present, in years long since past a wealth of the golden grain has been garnered. So, even in the same latitude, it should not be expected any one article or item will gratify the wishes of all. That which is commended by one will be condemned by his neighbor.

~~ARE YOU TAKING A HAND~~?

A writer in the Australasian Bee-Keeper bewails the fact that while tons upon tons of nectar are wasted annually in that country, for the want of bees to gather it, there are those who seek to discourage others from embarking in the business of honey production. This condition of affairs is by no means confined to the Island Continent. A quite general misconception of the situation in our own country is responsible for the cry of overproduction which we frequently hear. The fact is, taken as a whole, American bee-keepers are falling behind other honey producing countries in the matter of developing the market. The same haphazzard, unbusinesslike manner of honey selling which prevailed in our grandfathers' day, still prevails in the United States. There are a few isolated exceptions, of course, where honey exchanges have taken in hand the local case, and strive against great odds to better the financial condition of its patrons, through a system which is capable of effecting much benefit to the fraternity if it were but national instead of local in its scope.

The market problem is today the paramount question which confronts the honey producer of the United States. Large hives, small hives, when to put on supers, how to clip queens, the winter problem, etc., etc., all lose their interest if there is no demand awaiting the product. If the bee-keepers of the United States would throw one-half the energy and pluck into this question that is displayed by the honey producers of the little Island of Jamaica, the National Bee-Keepers' Association would hold in its treasury many thousands of dollars, and maintain permanently upon the road at least two expert salesmen whose business it would be to see to a proper distribution of our honey crops. Fraudulent goods exposed for sale throughout the country would fall under their official eye, and the perpetrators of the fraud traced and brought to the attention of the Association's attorney.

A national association with warehouses and permanent officers advantageously located, to whom every member may ship his product with a feeling of assurance that it will be so placed as to yield the best returns, is what is needed. A system of management in the distribution of the nation's honey product, that will see to it that American producers profit by every advantage afforded in the world's markets. As it appears to The American Bee-Keeper, such a course must necessarily precede any substantial condition of apiculture. We must see, first, to the outlet, systemize our marketing operations, and lay our plans sufficiently broad to accommodate and facilitate a work of this magnitude.

Whatever may be said of Yankee ingenuity and progress in other lines, when restricted to the bee-keeping fraternity, and applied to the marketing of his product, he must plead guilty of being decidedly a back number. He can look to and learn something along this line from any one of the British colonies. Ireland can give him pointers; Australia has her board of exports; Canada had, and we think, still has, a government appropriation especially for this work; Jamaica sends her honey representative to England to look after the bee-keepers' interests; but the proverbial Yankee contents himself with methods of his ancestors—though accepting one-third to a half less for his goods—and attributes the dullness of trade to overproduction.

How long is such a condition of affairs to continue? The answer is not difficult: Just so long as bee-keepers maintain their present indifference. It may be terminated at any time. Is the reader taking any hand in the upbuilding of the industry?

FROM OLD IRELAND.

"Bee-Keeper" seems to be a favorite name with apicultural publications. The latest acquisition to the list is the Bee-Keeper of Ireland, published at No. 20 Temple Bar, Dublin. Ten of its sixteen pages are devoted to advertisements, while the remaining space earnestly discusses the interests of apiculture in the Emerald Isle. The following is extracted from its leading editorial in the July number:

> If Ireland does not "buck up" in the bee business before long, some American will come over and "exploit" the Emerald Isle in the production of honey and beeswax. It is absolutely disgraceful that in a country so near London, the principal market of the world, in a country with a flora probably unequalled in the temperate zones, there are not three apiaries of over 100 hives and that Ireland markets a miserable 100,000 pounds of honey per annum. The poverty-stricken inhabitants eat the other 600,000 pounds produced. If there be not soon a rustle among the dry bones, the aforesaid American, when he comes, will make his "pile." He will turn out from each of his stations nearly as much honey as is now obtained from the whole country. Ireland is, without question, able to support 200,000 stocks, capable of yielding 200 pounds each, or 40,000,000 of pounds, and until it turns out that quantity the business will not be attended to properly. At 6d. per pound (the price of sections in America, with its hundreds of tons of production has never fallen so low as sixpence. but take it at that) there is nectar worth a million of money going to waste.

VERILY, IT "DO MOVE."

Our enterprising contemporary, Gleanings in Bee Culture, has discovered a bee-keeper in Nebraska, a Doctor J. L. Gandy, who sows catnip for his bees—acres of catnip, and sweet clover. This gentleman has cut a bee-tree in his vicinity which gave 517 pounds of honey. He secures annual averages per colony of 400 pounds, and he has thousands of colonies. As a result of his bee work (and catnip), since 1884, he has paid off $25,000 indebtedness and now has twenty thousand acres of choice farm lands, valued at more than a million dollars, to say nothing of considerable city property. Last year the doctor bought $40,000 worth of land, and of this amount $15,000 was the receipts of his honey sales. Next year—or the year after—it will be in order for some enterprising queen breeder to discover in his yard a strain of bees possessing remarkable wing-power, "warranted to work on Gandy's catnip."

HONEY AND BEESWAX MARKET.

WASHINGTON GRADING RULES.

Fancy.—All sections to be well filled, combs straight, of even thickness and firmly attached to all four sides; both wood and comb unsoiled by travel stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy white," "No. 1, dark," etc.

Chicago, Aug. 11.—Some comb honey produced in 1902 is now on sale. Fancy brings 15 cents; anything off in appearance or quality sells at 13 to 14 cents for white; amber grades 2 to 3 cents per pound less. Extracted selling at 6 to 7 cents for white, light amber 5 1-2 to 6 cents, dark 5 to 5 1-4 cents. There is a fair demand for all grades and kinds. Beeswax steady at 30 cents.

R. A. Burnett & Co.

Buffalo, Aug. 8.—It is too early in the season to ship new honey to Buffalo. Demand is too small as yet. There is too much small fruit in market and will be for some time. A very few arrivals of fancy new in pound combs are selling at 15 to 16 cents. Dark and poor proportionally lower from 14 to 8 to 8 and 10 as to quality.

Batterson & Co.

New York, Aug. 11.—The demand for honey is quiet with plentiful supply. We quote: Comb, 11 cents to 14 cents; extracted, 4 cents to 5 cents per pound. The demand for beeswax is easier with more liberal supply; prices, 28 cents to 29 cents pound.

Francis H. Leggett & Co.

Kansas City, Aug. 9.—Honey is in poor demand, with good supply. We quote: Comb, 11 to 12 1-2 cents; extracted, 5 to 6 1-2 cents. Receipts of new comb honey, large and good. Beeswax is in good demand, with light supply; price, 30 cents per pound.

Hamlin & Sappington.

Just a Minute of Your Time.

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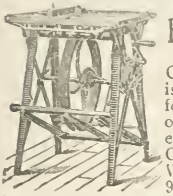

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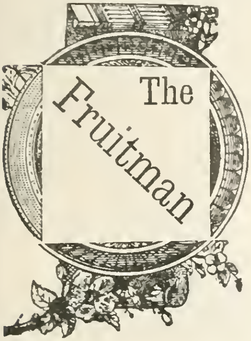

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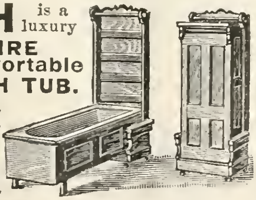

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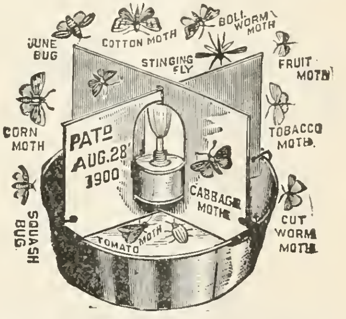

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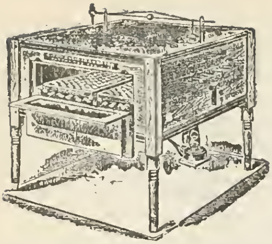

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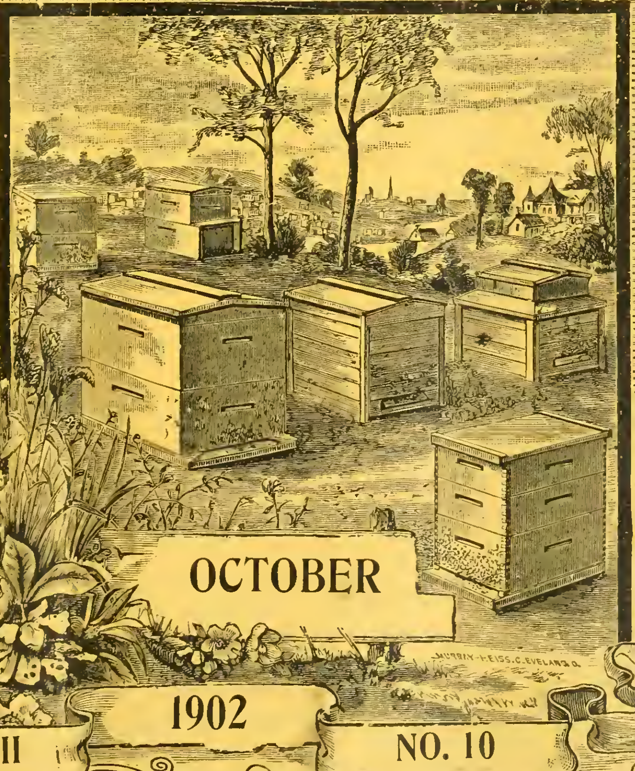
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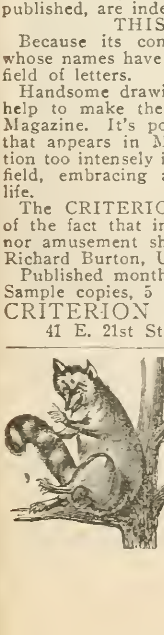

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QUEEN REARING.

Prejudice, Ignorance and Mis-Statements the Rule in the Profession--Alley's System Championed.

(Arthur C. Miller.)

"SAVE at the spigot and waste at the bung," quite aptly fits most of the so-called economical systems of queen rearing now in vogue. Each system has its champions, but unfortunately the discussion of the merits of each has thus far been carried on almost entirely by those who have for sale queens reared by the method they are advocating, or who have for sale implements for use in some system, or both. Such evidence is of necessity biased, and of little or no value to the practical bee-keeper who desires to get at the merits of the subject.

Labor and time are used to make artificial cell-cups; much more time is used to stock them with larvae, and all to what purpose? That the queen cells may "be built conveniently on a stick" and that "valuable combs may not be mutilated." Could any seemingly plausible statements be more fallacious? And those two statements are absolutely the only ones used in defense of the pernicious cell cup system of queen rearing.

At the invitation of Mr. Alley I recently visited his apiary to inspect his new system of queen rearing, and the queens reared by it, and I will here try to describe some of the features which go to make his system the most thorough, complete, economical and efficient of any now in use.

His method of preparing the bees for cell building is as given in his book, as is also the keeping of his breeding queen in a small hive and the stripping up of the egg-filled combs for cell building, but from that point on, many changes have been made. Instead of fastening the strips of cells to the lower edge of a half comb, he now attaches them to strips of wood and places several of them in a frame just as is done with artificial cells. The results are as good as by the old way and the cells can be removed with ease. This is particularly so when he leaves two vacant cells between those with an egg. Regarding the mutilation of combs to obtain eggs, Mr. Alley had substantially this to say: "Which is better for me, to strip up in ten seconds a bit of comb four inches square, costing nothing and furnishing eggs for one hundred queens, or spend many minutes and much good eyesight transferring larvae from comb to cell cups, just to save mutilating a piece of comb? The comb costs me nothing; my time is worth money. Those little combs are built by otherwise useless bees, for the little nuclei from which the queens are fertilized will build combs in those frames when otherwise they would be of no value except as homes for the young queens." But suppose he did not use the small hive plan for his "stock" queen, and instead had to cut into the comb of a full L frame. Two cuts made diagonally across the comb will remove as many rows of cells as desired, and the comb thus cut when returned to the bees, will be quickly and neatly rebuilt. If but one row of cells is removed in a place, the renewed part will be worker comb. I know these facts because I use that method.

But the small comb plan has a particular advantage over the use of a large comb, either for slicing up or for transferring larvae, in that all the eggs it contains are within a few hours of the same age, which is never the case with an L or other large comb. Mr. Alley is able to know almost to an hour the age of the eggs he uses.

After the prepared strips are given to the bees and all building is well started, Mr. Alley makes a radical change from his old system, and from both a theoretical and practical point of view I believe the change is a most decided advance in queen rearing. From the appearance of the queens and the work they are doing I feel sure that the results are sustaining the theory. He assured me that queens thus reared were as good the second season as the first, and the work of two year old queens that I saw sustained his contention.

I could not persuade Mr. Alley to let me publish the details of his present method, at least not before another season. He wants to test his queens over another winter and to make further experiments before making public his discoveries. Also he is to put some of his queens into a comparative test with queens of several other breeders, and if they are really as superior as believed, it will soon be apparent.

To his system of small framed hives Mr. Alley attributes his success in perfectly and cheaply caring for the queens after they have hatched. Twenty-four hours before the cells are due to hatch they are placed in cages of the well known "queen nursery" and as soon after the queens emerge as is convenient they are transferred to the little nuclei. But if no nuclei are available the queens are retained in the nursery until later, it thereby temporarily serving the purpose and saving the expense of many nuclei. These latter consist of a little box about six inches square and six high, having the bottom nailed fast and the cover loose. Each contains four frames 5x5 1-2 inches square, outside dimensions. Through the cover of each is a hole of one inch diameter, and into them are slipped the funnel shaped feeders. Through these holes he also introduces the queens and very convenient they are for the purpose.

Without the feeders he could hardly do, for on them depends much of his success in maintaining these diminutive colonies, and his particular style of feeder is simple, cheap and perfectly adapted to the purpose. The chief objection to special frames and hives for nuclei has been the labor and trouble of stocking them in the spring, and of disposing of them profitably and readily in the fall. Mr. Alley's system well meets these points and should be of interest and value to all bee-keepers. He has special hive bodies built, which take 13 of the small combs. As they have no top or bottom they can be tiered to any desired extent, though he generally uses but two for wintering. To start, he fills a hive of three or four such chambers with frames filled with foundation, and into it runs a queen and bees. Soon the frames are filled with comb, brood and honey, and the colony is ready to be broken into parts, each part of four combs with adhering bees forming one nucleus. The queen and some of the combs and bees are left in the hive, more frames of comb or foundation are added and soon the process may be repeated.

In the fall as fast as the queens are disposed of the combs and bees are removed from the little hives to these larger chambers, which in turn are combined until a strong colony is formed, a queen is given and in a few days they are ready for winter. Mr. Alley says such colonies in such hives winter perfectly and in the spring are ready to recommence the chain. He winters his bees in a cellar. His breeding queen is kept in one of the little hives and in the fall is put into the larger chamber and given sufficient bees, combs and brood. Thus a few score frames at less than a cent each, some fifteen special chambers at about twenty cents each, his nucleus hives and feeders at about a quarter each, and his system is complete. Could anything be cheaper and at the same time more simple and perfect?

Now compare with his system, the sticky, fussy, dauby way used by some in making nuclei, or the pains and expense of getting little combs in sections stocked with brood and bees as used by others, and the useless expense of large nuclei of standard frames as advocated by still others. When the expositions of all these other various systems are analyzed, it will be seen that they are naught else than advertising matter, just something on which to base a claim for superiority of queens reared by the system used by the advocate.

I have yet to see published a statement of the real conditions necessary to the production of normal, healthy queens. One man says that the best can be produced only by transferring the larvae to an artificial cell; another that all queens must be reared in a full colony with a laying queen; another, that a small nucleus will rear as good queens as a large one; and so on in endless confusion. and not one of them knows the true why and wherefore of successful queen production. or if knowing. has failed to tell it. As fine queens as any one should desire can be raised with a cupful of bees. and as poor queens as ever lived may be produced by a bushel of bees. Perfectly strong and vigorous queens may be "mothered" in a small nucleus. and queens constitutionally strong may be ruined in a large one. The amount of error and senseless matter that has been going the rounds of the press is astounding. and yet what else should have been expected when so many of the prominent writers scoff at all attempts to have the work and investigations truly scientific. i. e.. to ascertain the truth or facts. the fundamental causes. To be sure, one or two call their systems "scientific." but nothing could be less so. and if they are asked to define the "laws" on which their system is based. they can only reply in the most vague way. If the fundamental laws are unknown. how can a system be devised which will conform to those laws?

Lest some of the earnest bee-keepers who are without a college training despair of doing aught towards a scientific study of bee life. let me assure them that a college degree does not necessarily make a scientist, and that some of the very best work is done by men of quite modest erudition. It is the faculty of getting at the root of matters that counts: the ability to see the true relation of one fact to another. Mr. Alley has never had the advantage of what may be called a scientific training, and yet he gets at the root of things most effectively, and not only has he recognized the essential elements governing good queen rearing, but he has supplemented it with a system which enables him to conform to those laws in the easiest and cheapest manner. Because Mr. Alley has recognized the fundamental laws and because he has successfully and simply applied them, I say he is the ablest queen breeder of the country today, and his system is the best.

Providence, R. I., Aug. 30, 1902.

Bee-Keeping for the Masses.

WHEN I look into the future I see millions of small farms, where neat and comfortable homes furnish all things that are good for the sons and daughters of the household. The old time idea of a good land was one flowing with milk and honey. In the ideal home there should be several cows, one or more horses. some fowls, a good fruit garden and orchard, and several colonies of bees. I hold it to be quite true that when we produce luxuries we are quite sure to have some of them on our tables: but if they have to be purchased we get along with less, or go without altogether.

Our fruit growing friends know well the importance of mixing brains with the soil in which to produce the paying crop. The same mixture of brains is needed in producing a crop of honey for the table. Now let me suppose you have a few colonies to begin with.

Of course. you must have some tools to work with. Let me suggest that you at once subscribe for a good bee Journal.

Then purchase a standard. up-to-date bee-book. You will also need a good smoker and bee veil. A pair of gloves may help at first. but you will soon prefer the hands uncovered and the fingers free.

Now this outfit need not cost more than four or five dollars. but don't try to get along without these things. Now you should know, what to do, and how to do it.

Not being able to answer these questions correctly is the secret of all failure—success lies in the path of him who knows his duty and does it.

What to do. See that your hives are uniform in size and standard make, with all frames movable. See that you have two supers full of empty, clean sections, and an extra hive for each colony. These should be ready by the first of May. Use starters of comb foundation in sections and also in empty frames, so as to ensure straight work. Level the hives carefully in the spring and keep them level. Read your bee papers, and then see that your hives all have good laying queens. Read your bee book and learn about foul brood. Find out what are the signs of queenlessness and see that each colony has a good queen at the close of the season and thirty pounds of honey for winter. Contract the entrance so mice cannot enter.

When to do it. Open your hives often in the spring, but always when the bees are flying freely. When any hive is short of stores you can exchange an empty comb for a full one taken from an extra heavy colony, or feed white sugar syrup or honey. You can feed in the super by pouring the syrup or thin honey into a shallow dish placed on the brood frames, and covered with a bit of sack to retain the warmth and yet give the bees a chance to come up easily to the feed. A few sticks or shavings placed in the dish will keep the bees from drowning.

Do not set apart the day of rest to do the needful work about your bee yard. In the long race of life six days of labor per week amounts to more than seven days of continuous toil and care. And it is wise to set a good example.

How to do it. In all your work with the hive have your smoker lit, and use plenty of smoke, and learn to use it just a moment before it is needed. A hive thoroughly subdued soon learns to behave properly and can often be opened without smoke or veil. But the wise worker will have his smoker lit and within easy reach.

To get a large yield of honey, have your hives full of bees by June first, and keep them so through the summer. See that they go into the supers early—June 1st to 15th, and never let them be lacking room to store surplus. Take honey from the hives as fast as finished so it may be clean and white. Keep in a dry, warm room; it must not get damp or freeze. Box it safe from bees, mice and dust. Melt some of it carefully to preserve the flavor, thin it so it will spread easily and set a dish of it on the table every day in the year.

A glass of milk, a plate of butter and good bread makes a diet for growing children more wholesome than beef, pork, potatoes and pastry, washed down with strong coffee. Give the children bread and honey. It will make the cooking problem simpler for the housewife, save many doctor bills, and make a first class market for your honey.—A. F. Porter in Rocky Mountain Bee Journal.

THE SITUATION IN IRELAND.

An Interesting Letter from the Editor of the Irish Bee Journal.

(J. G. Digges, M. A.)

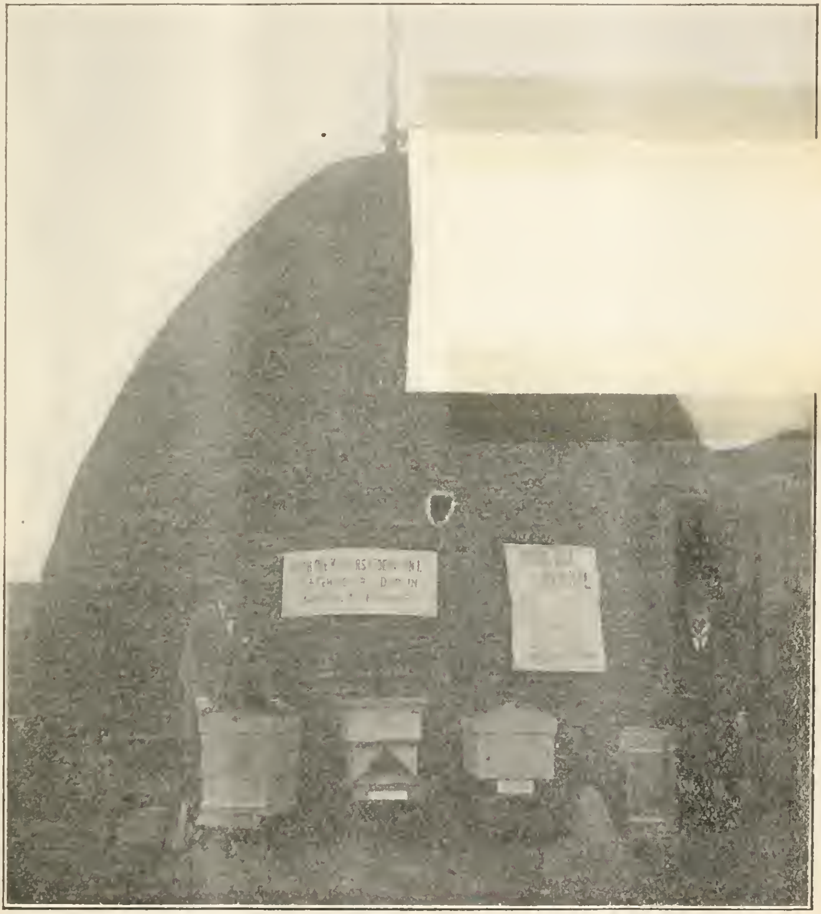
THE differences of climate and season between Ireland and Florida are wide enough to admit of a variety in the methods of bee-keeping in the two countries.

Our honey gathering extends over a period of a few weeks in the year. During the rest of the time we are working either to build up our stocks preparatory to the honey flow, or to prepare them to endure the trials of our winters. As our climate is perhaps the most variable on the face of the earth—varying chiefly from infamous to more so—our hives must be capable of being adapted to the quick-change tricks of the weather.

The hives most commonly used in Ireland are the "C. D. B." and the "Federation" hives. The former is according to the design of the "Congested Districts Board" and the latter of the "Irish Bee-Keepers Federation, Ltd." The parts are interchangeable. They consist of floor-board and legs, body-box, super-box and roof. The body-box contains eleven "standard frames" (14x8 1-2 inch deep) and a "Dummy." The super-box is capable of holding three crates of twenty-one sections, each. The roof is fitted with escape cones used for clearing crates of bees and in the "Federation" hive, is slightly sloped to the back and covered with zinc. To protect against the cold of our winters.

the super-box is inverted and telescoped over the body-box, the porch being transferred from the latter to the former.

Dr. Smyth, of Dovemana, whose articles upon Foul Brood in the Irish Bee Journal have awakened considerable interest even in the States and Canada, has recently designed a hive around which a fierce controversy is raging. The hive is absolutely free from dead air spaces; the floor-board may be raised and lowered at will; the frames are iron. As to the sides and bottom and the roof, they are flat and canvas covered. The designer claims for his hive that it's "A 1." for the prevention of foul brood, but the critics, to whom any departure from the standard measurements is of the nature of mortal sin, see nothing but devilment in the design. It is impossible to say where the controversy may end.



THE MAMMOTH "SKEP" AT CORK, IRELAND.

The Irish bee-man's thoughts are, at present, mainly directed towards Cork, the beautiful city on the Lee, where an International exhibition is in full swing, and where the Irish Bee-Keepers Federation, Ltd., to the order of the Department of Agriculture, has erected a mammoth straw bee-skep to contain the exhibits of hives, honey, etc. The skep is twenty feet high. It is lighted with electricity and is the centre of interest for multitudes of visitors. The tent which belongs to the Irish Bee-Keepers Association, is much in evidence all over the country during the season. A hundred spectators can witness the manipulations while themselves fully protected from assault by the bees. Candidates for certificates as experts are examined in the tent, before the public and Mr. M. H. Read the Hon. Sec. I. B. K. A. (shown in the illustration in shirt sleeves; see page 182) generally takes charge of the operations.

A great development of the industry is taking place in Ireland this year. The principle of co-operation has been introduced and has done a great deal to improve the prospects for bee-keepers. Co-operative societies are being formed all over the country and these are federated in the metropolis where a depot has been organized for the purpose of marketing the honey and of supplying all requisites at co-operative prices. The government also has taken up bee-keeing this year as an industry deserving of support, and in every county in which the local council votes a grant of money to promote bee-keeping the department puts down a more than equivalent grant for the same purpose. The fund thus formed is used to pay an instructor to grapple with foul brood and to assist persons to start bee-keeping by supplying them with hives and bees and requisites at low rates and upon a scale of deferred payment. Altogether things are looking up in old Ireland, from the bee-man's point of view, and if you American cousins would only eat up your own honey and so keep it out of our markets, we should soon be in a fair way to make the business, as well as the bees, hum.

Lough Rynn, Dromod, Ireland.
July 23, 1902.

The Lone Star Apiarist, which began life so full of promise last January, died a natural death in April. The National Bee-Keeper appears to have also joined the silent majority, and Texas is left without a single bee journal thus early. That "the good die young," has long been said; and the instances noted corroborate the adage. They were both good little papers.

DO WE LEARN AT CONVENTIONS

A Number of Interesting Subjects Tersely Touched up by Our Gleaner of the World's Bee News.

(F. Greiner.)

THE above question was asked me recently by a friend. In reply I want to say this: It is a fact, that many times those who can write or make a good speech are unsuccessful in their business; and those who are successful cannot write. At bee-keepers' conventions the two meet face to face and the first named will glean good ideas from the other one, not only for his own individual benefit, but also to the advantage of the fraternity in general, for it seems next to impossible for him to keep all the good, helpful things to himself after he gets hold of them. Thus, of course, the practical and successful man, the bee-master, may not learn a very great deal; but the many are greatly benefitted by him.

Now, really, are there any such bee-masters among us, that could not learn something more? I am reminded here of an historical incident.

GUNDELACH KNEW IT ALL.

Sixty years ago a few bee-keepers in Germany conceived the idea of starting annual conventions. In order to organize they sent invitations to the known bee-keepers and finally did organize what is known as the Wander-Versammlung. Mr. Gundelach, a noted bee-keeper, wrote to Dzierzon in response to the invitation: "I do not see the need of attending such a meeting as I don't believe anybody can enlighten me on the subject of bee-keeping; in other words, I think I know all that is worth knowing." Friends, think of it. A man living 60 years ago had an idea of himself, that he had reached the climax! Did he? Do you believe he had? Certainly not! You may be sure the next 50 or 60 years will bring even greater achievements than the past, and in order to reap the full benefit we will need to keep in close touch with one another. In fact, that is one of the secrets, the essentials, of our success. A single bee would not make any showing as to laying up a supply of stores; thousands working to gether in harmony fill their hive with honey and may furnish you and me with a nice surplus.

If each one of us add but one little kernel to bee-knowledge, the wisdom gained will fill an encyclopedia. So it will be seen that it will handsomely pay us to improve these opportunities, looking for more light even at bee-keepers conventions.

FEEDING BACK.

I did not go away unsatisfied from our last meeting. I heard Mr. Hutchinson say some new things in regard to feeding back to get unfinished sections finished up, which impressed me favorably, and may be new to many others. Supposing you have 12 cases of unfinished honey at the close of your honey season. Place them on as many colonies, selecting your best comb builders, preferably of native blood. When the bees have taken possession of the sections, take six of the twelve off and place them with all the bees on top of the others; then feed the six, each having two cases, as much as they will carry down. The object is to add more bees to the colonies that are to do the work. As soon as any case is done, remove it and replace by one taken from another colony; take bees and all. Follow up this method, thus all the time reducing the number of the colonies kept at work, till finally you are feeding but one colony, and all your once unfinished sections are finished.

CLEANING UNFINISHED SECTIONS.

Mr. M. F. Marks was caught letting out a secret in regard to having honey removed from partly filled sections or any honey combs, that, if true, will prove a great help sometimes. Take a hive-body and fill full of such sections or combs as you wish to have cleaned out. Carry one section to a colony that needs feeding and place it inside of the hive for a few moments. When well covered with bees take it back to the hive prepared before, which should be a short distance from the apiary. You will thus start a case of robbing. Adjust cover bee-tight and contract the entrance so that but one or two bees can go in at a time. It is said that the robbing bees will protect the robbed hive against other bees as they would their own. One colony might, in this manner, be utilized to clean out a good many sections, or a number of colonies might be set to work at one time, each one having their own feeding ground. The thing looks almost incredulous; we will try it next year.

KEEPING DOWN THE GRASS.

For a bee-yard no place suits me as well as a nicely kept lawn somewhat shaded by fruit-trees. To keep down the grass has bothered many a one. My method used to be, to allow the first growth in the spring to grow tall enough to cut with the scythe; after that to use the lawn mower frequently. The weak point is that the grass near the hives cannot be reached and will grow very tall unless it is removed by hand. I have been pretty sure that a few sheep or a lot of hares could be used in place of the lawn mower, and I am pretty well convinced now that it will work nicely. Mr. Marks says, he kept two or three lambs in his apiary of about 80 colonies and they did the business to his entire satisfaction. This is surely worth knowing. I think I shall fence in my yard and build a shelter for the lambs in the spring. . Perhaps I may thus save time when it is most valuable.

I am impressed with the great importance of the fact that we must make a stand against the many enemies we have: adulterators, dishonest commissionmen, ignorance, spitefulness, etc. Join the United States Bee-Keepers' Association. Apply for membership to Eugene Secor, Forest City, Iowa.

Naples, N. Y., Dec. 28 1900.

Once more we beg to assure our readers that so long as this paper is sent in a white wrapper, it is paid for. When the blue one appears, it is time to renew or request it stopped. When the wrapper is red, the subscriber addressed is in arrears upon our books. So long as this system of notification is in force, no one will be asked to pay for papers he has received in a white wrapper. It is therefore not necessary for any subscriber to write us in order to learn whether his subscription has expired or not, as some occasionally do. Watch for the blue one—that tells the story.

Uniting Bees.

(G. M. Doolittle.)

QUESTION:—I think I have seen somewhere that it is best to unite weak colonies of bees for wintering, but cannot turn to the matter now that I wish to. Will you please tell us in the American Bee-Keeper how to unite two or more weak colonies so that they may be strong enough for winter? I have some small colonies which I wish to put together this fall; and as I consider myself only a beginner in bee-keeping, any advice would be acceptable to me.

Answer:—It is a very proper thing to do always, to unite two or more weak colonies of bees for winter; for two weak colonies, kept separate, will consume nearly twice the stores that both together would united, and very likely perish before spring; while if put together, they would winter as well as any good colony. A good way to proceed is as follows: If one of the colonies has a queen known to be feeble, or inferior in any way, hunt her out and kill her, so that the best queen may survive; otherwise pay no attention to the queens, for one of them will soon be killed after the uniting. Or if both have good queens, (and it is not too late in the season), and you have any colony having an inferior queen, it is well to hunt out the inferior queen and introduce this better one in her place, rather than kill her, for, in this way, you will have a good queen in this last colony next spring, instead of a poor one.

It is well to look toward improvement at all times, when we can do it to advantage. Having the queen matter disposed of, go to the colonies you wish to unite, and blow smoke quite freely in at the entrance, pounding on the top of the hive at the same time with the doubled up fist, a stick of wood or a light mallet. When both have been treated in this way, go to the first again, and afterward to the second, treating as before, when the one to be moved from its stand is put on a wheelbarrow and wheeled rapidly to where the one it is to be united with stands. This smoking and pounding causes the bees to think something quite serious is happening and tends to make them mark their location on their first flight afterward, so that it helps to keep them from returning to their old stand. Having both close together select out the combs from both hives which contain the most honey, and come the nearest to filling the frames, (should any frames be only partly filled), setting these well-filled frames into one hive, and that, the one which occupies the stand the united colony is to occupy. In thus setting in the combs it is always best to alternate the frames, whereby the bees are so mixed up that they have no desire for fight, for each bee touched by another is a stranger; the bees thus uniting as peacably as do two swarms when they come together, as they often do in swarming time, when two go together and cluster on one limb. After the hive is filled, arrange the quilt or honey board and put on the cover. Next put a wide board or sheet in front of the hive, fixing so it leads up to the entrance, and proceed to shake the bees off the remaining frames, taking first a frame from one of the colonies and the next from the other, thus mixing these shaken bees as were those on the frames set in the hives. After all the bees have run in the hive, set a wide board up in front of the same, standing it up sloping over the entrance, so that the next time the bees fly they will be compelled to fly against it, or crawl out around it, thus giving them an additional caution to mark their location on their first flight afterward.

We cannot guard too closely about those having been moved going back to their old home. As said before, the smoking, pounding, wheeling and mixing of the bees, all have a tendency to cause the bees to look after their location, and the wide board helps also in this direction. Then, if in addition to this, all relics of the old hive are removed, so there will be nothing homelike about the old location to entice them back, scarcely a single bee will attempt to go back there to stay.

Put the remaining combs away in some safe place for the next season's use, and the work is done. If this uniting is done near the evening or on some cool, cloudy day, and the bees are caused to fill themselves thoroughly with honey, very few will fly away in the uniting process.

Borodino, N. Y., Sept. 2, 1902.

Cyprio—Golden Bees.

I SHOULD like to enquire after the number of yellow bands carried by your breeding queens? This may lead me to send you along a lot of subscribers.

Under heading of Editorial Chat, there is a question I may answer. Mr. W. Reid asks has any of your readers tried pure Cyprian's results, and where obtainable.

I am not a Yankee student. My knowledge has been obtained in England and the reply gleaned from the British Bee Journal twenty years ago.

With the British boom came the Italian.

The Britishers knowing that black bees were plentiful in Italy soon discovered the source of the yellow bands, they were brought by the Monks from the Holy Lands. Benton established a trade and afterwards discovered a more golden marked bee in the Island of Cyprus, these and the Holy Lands are the source of the American Goldens so called Italians. I have kept them in England and Australia, have a few now not quite pure. All those with a cross are what is called by me good Italians, the less black blood the better they work and can be handled best without smoke. When pure, good allround bees are so beautiful to handle and look upon that the novice never tires of opening up and exhibiting to his friends; the result is foul brood and disgust with Cyprians.

There is small differenece between Holy Lands and Cyprians for work, no blacks will ever lay such solid masses of brood proving whole frames are covered at short intervals. Under careful treatment they will not fizz, they are first in the morning and last at night, rarely ever hang round entrance. Prevent your Cyprians laying out of season and they will make a brood-nest in the spring covering 20 simplicity frames, from these, honey can be produced at a price to compete with treacle always providing that you steer clear of the hundred and one useless inventions that go to make the supply dealer fat.

When roughly handled they will clearout the novice.—John Jordan.

(Friend J. my breeding queen produces bees with three bands. I believe you are wrong when you say that the Goldens of America were produced from the Cyprian and Holy Land bees. I believe it was Messrs. G. M. Doolittle and Hearn, who originated the Goldens, and that they used only pure Italian bees to breed from.—Ed.) —Australian Bee-Keepers' Review.

CATCHING A BEE.

Clever Idea of a Timid Bee-Keeper—Is Red Objectionable to Bees?

(Kate V. Austin.)

WHAT may seem a trifle is often worth mentioning. For instance does everybody know just how to entrap a bee when it is buzzing on a window pane?

The other day, one of my bees flew into the house, and began capering upon the window. I could not raise the sash to let it out, on account of the screen barring its flight, and I was for a moment at a loss just what to do; for I was afraid of handling so delicate and yet so piquant an insect. But suddenly a bright idea buzzed into my head and this is what was done:

I took an envelope that was cut open at the end and gently pushed the open end up under the bee, and down into the paper trap it fell; then carrying my prisoner to the door I saw it fly safely and joyously away.

Now this way of catching a bee is familiar, no doubt, to both man and bee, but nevertheless the idea was new to me and so I thought to give it wing in case that such a simple method might not occur to everyone.

There is a question which I wish some one would answer for me, and that is, does the color of red anger bees? Not the color of red in flowers, but the color of red in dress. Would a flaming red dress worn by a keeper of bees irritate them beyond endurance? I fancy it would, but have no wish to try the experiment. I like my bees, and then, besides, I want to keep on the good side of them, or rather, I wish to keep at that end oposite the sting. But there are those who delight in experiments, absurd and otherwise, and I wish they would inform me whether bees have an abhorrance of red in garments, like unto the turkey gobbler.

Centerville, Ind. July 21, 1902.

THE Bee-Keeping World

AUSTRIA.

Alfonsus says, in Bienenvater, that the Central Verein has designed and adopted a honey jar which is sold by the manufacturers to bee-keepers only. It is hoped that when the fact becomes generally known all honey put up in these jars will stand above suspicion.

The Austrian Bee-Keepers complain of poor honey seasons. Rain and cool weather have prevailed there as well as in the United States during the honey season. Only a few bee-keepers report fair honey crops.

SPAIN.

Workingmen, who were engaged in the construction of the Trafalla railroad, Spain, while cutting up a huge elm tree found a cavity inside of the body of the tree. It had no exit. The wood and bark around the cavity were perfectly sound. Fifty rings of wood-growth could be counted, each representing a year's time. In the cavity was found a squirrel's skull and otherwise it was well filled with combs full of honey in a fair state of preservation.

GERMANY.

The display of electricity in the skies diminishes the secretion of nectar in the blossoms, sometimes entirely stops it, says the Preussische Bztg. It also affects the temper of the bees, causing them to be ill natured.

Dzierzon tells in Leipziger Bztg. how to obtain a good stock of pollen-filled combs to be used in the spring for stimulating. It will be remembered that D. uses twin-hives. The partition (wood) between the two colonies is removed and replaced by a screen-board. The queen of one colony is removed. The queenless colony having a queen-right colony on the other side of the screen does not feel its hopeless condition and keeps right on working. As the amount of brood to be fed decreases from day to day more and more pollen is stored from day to day and the result will be pollen-filled combs. They should be removed occasionally and empty comb given. Sealed brood should be added from time to time for obvious reasons. A queen should again be introduced in time that a generation of bees may yet be reared before winter sets in. The pollen-filled combs may also be used to good advantage in the fall to fix up late young swarms having a short supply of pollen in their hives.

The bee-keepers of Germany, and even a few German bee-keepers in America condemn the American hives as impractical on account of the open top feature. Usually they condemn before they give them a thorough trial. Once in a while I find a venturesome fellow over there that actually tries them. E. Stolzer says in Bztg. for Schlesurg Holstein in substance: "Among the American bee-keepers the principle 'time is money,' is the leading and deciding one when selecting a hive. Where bees are kept by the hundred colonies, hives must admit of being manipulated easily and quickly. The American bee-keeper does not often handle single frames but prefers to handle them in whole sets. Thus he can manage large apiaries without extra help. By adding or renewing these sets of combs the hives may be enlarged to any extent or reduced to the minimum. This is business and only practicable with hives accessible from the top. The principle is worthy of applying to conditions here, etc."

In the Bztg. for Scleswig-Holstein

Mr. Steenhusen gives among other instructions for the production of comb honey the following. "Comb foundation should not be used, not even for starters. It spoils the pleasure in eating comb honey. From a young swarm having occupied its hive 24 hours suitable starters for sections may be obtained." (The writer of the above is satisfied that extra-light section foundation is practically unknown in Germany, still he feels like endorsing what Steenhusen says. He thinks full sheets of comb foundation in section honey are an abomination and should never be used.—F. G.)

Stahl. of Rudesheim, has come to the conclusion that bees are often attracted by the unsound or bruised peaches and work on them. After having extracted the juices from drop-peaches they will search to find vulnerable spots on the fruit still on the tree. Many observers, he says, are thus misled and it prompts them to say: "Bees do sting peaches." —Leipz Bztg.

Bees are offered at 25 cents per pound in Schlesuig-Holstein. A young laying queen is included at that price. (Cheap enough.)

It is asserted in Deutsche Bienenzucht that queens reared in the natural order of things—at swarming time—are always larger and of greater longevity than the queens reared from worker larvae.

F. Greiner.

JAMAICA.

A FLOURISHING SOCIETY.

There are now 143 members on the roll of the J. B. K. A. This does not represent one half of the bee-keepers in the island. Every bee-keeper should make it a point to join the Association and that promptly. The full measure of success can only be attained when every bee-keeper becomes identified with the movement. And the good work the Association is doing is sufficient inducement.

The 'Jamaica Preserves and Honey Company, Ltd., which is about to be registered, promises to be a success from the start. The men identified with the undertaking must inspire the confidence of every one, as they all thoroughly understand the business they are about to embark in, and are throwing their whole energies into making it a success. The advent of this company places the J. B. K. A. on a sound and secure footing. The management and members are to be congratulated on the success of their efforts in this direction.

The total quantity of honey exported during the year ended 31st March 1902 was 16,804 cwt. an increase over the previous year of 3,380 cwt.

JAMAICA PRESERVES AND HONEY CO., LTD.

The chance now offers for the Bee-keepers of Jamaica to assume almost entire control of all that appertains to the welfare of their industry, and we sincerely hope they will not be slow to take advantage of this opportunity. The success of the J. B. K. A. has exemplified the truth of the adage "The Gods help those who help themselves" and has shown conclusively (if proof were wanting) that in co-operation lies the safety of the industry.

If every bee-keeper had seized the opportunity of joining the Association at its inception, the hands of the management would have been strengthened financially and otherwise and the good results would have been far in excess of what they are, gratifying as these results are. The management realized from the start that if the Association were to become a fixed institution and to carry on the work undertaken efficiently and creditably, capital would be necessary and could only be obtained partly by co-operative effort and partly by the aid of capitalists. Bee-keepers are not capitalists, and knowing this the management have interested those who are able to help them financially by submitting a sound business proposition and on the understanding that the bee-keepers will do their share and thus show what they are capable of helping and are willing to help themselves. The Jamaica Preserves and Honey Company, Ltd. is the outcome, and now that the shares are being placed on the market it is the duty and privilege of the members of the J. B. K. A. primarily and secondarily of the entire body of bee-keepers to support the undertaking by taking up as many of the shares offered as they can afford to, and even to do so at some sacrifice if necessary. The company is not intended to supercede the Association but it is a distinct concern created for the purpose of developing and carrying out on business lines the aims and aspirations of the Association. As the officers of the Company are practically members and officers of the Association there is no room to doubt that the interests of all parties will be thoroughly conserved. Bee-keepers! Arise and be doing!—Jamaica Times.

The Seasoning Series
By Deacon Hardscrabble

Dear Brother Hill:

"Leave hope behind, all ye who enter here"

was the legend Dante put over the gates of Hell, and its what I stuck above the door of the "House of Critics." If the critic says not what he believes, he despises himself and if he states as he believes he is hated by the criticised. It be rough either way.

Now, "Stenog," of Gleanings, don't like the critic with a sting, prefers "the good natured man," presumably one of the colorless, lackadaisical chaps, of the type who on Sunday mornings ask their wife if "we may put on our Sunday breeches." He says some funny literature consist of nothing but stings. Well I reckoned that sooner or later some one would "discover" that stings were funny. Always thought so myself. What's he 'spose a critic's for? Just to holler about the good and skip the bad? Huh! And there's a powerful lot of folks who wear a perpetual broad grin carry their religion on their coat and at the same time pick your pockets. Huh! I surmise Stenog ain't right sure what he does like, for he commends Brother Dadant for fighting and calling a man a fool. Did the man good and relieved Brother D. Tell Stenog to go way off and sit down and look at himself, and when he wants to make comments to be careful how he does it. Huh!

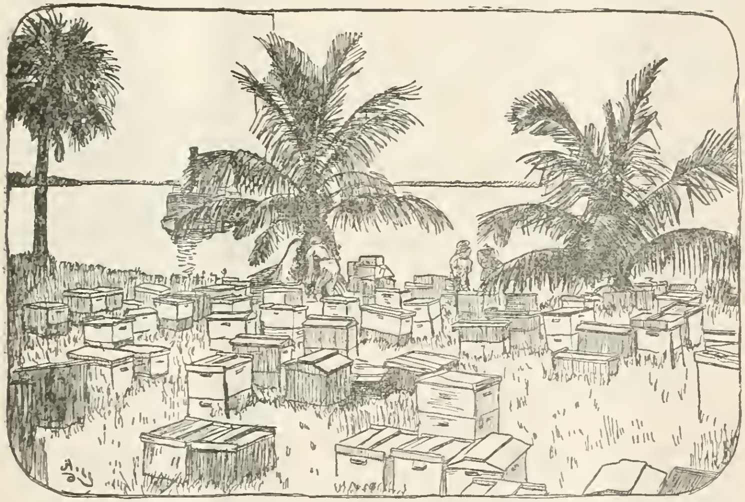
Rip Van Winkle has been ripping things in the American Bee Journal, calling folks liars and cheats for misquoting the money market, takes their own words and proves it so plainly that those who run may read. And yet even now Editor York can't see it. Just drop a line to George and tell him he is dense. To call him dense is charitable and fits George's ideas of ethics. It just "happened" that all the testimony for the quoters was given by themselves or their associates and was printed by those to whose financial interest it is to have the market misquoted. Every mother's son of them is a honey buyer. And then they have the face to pose as "The people's champion." Hurrah for Rip Van Winkle! A few more like him and that Donnybrook Fair will be well under way and the mutlifaced "champions" will have the "scrap" of their lives.

What do you think of a "leader," a "teacher," a "shining light" who thinks his colonies free from drones until he puts on traps and finds them full of drones no larger than workers. Queer sort of "experienced bee-keeper" who can't tell a drone from a worker except by size. Queer sort of trap that will not let workers through and catch drones of the same size. Guess that trap was sot for the "leader" that time, sure. 'Twas a Tennessee boy who gave himself away that time. Well the poor fellow isn't alone. Hark ye—A New York boy writing on "Missing Links" in queen rearing and citing Brother 'Lisha's remarks about "umbilical" cords, says "since the doctor wrote his articles I have examined more closely into the matter and every cell which I could spare since has been carefully opened, only to find in each the tendrils he speaks of as they run from this cord up inside the base to the wax cell-cups, and all under and through the royal jelly in every conceivable direction." What d'ye think of that? Got 'em, and got 'em fust, too! D'ye spose he'll be able to find a hole to crawl into when he learns what that so-called "umbilical cord" really is? And to make the thing complete Georgie winds up the article with a neat little "ad" of the book describing the system by which only the "Missing Link" may be produced. And this in "The Old Reliable," the "Peoples Champion."

It calls to mind Grandpa Hutchinson's expressed astonishment over the versatility of Jimmy Heddon, a bee man, in getting up a fish bait for bass. Bless his dear old heart, don't he know that fish bait is the stock in trade of nearly all the leading bee men, supply dealers, queen breeders, honey merchants, etc.? But their bait is not for bass, but for suckers. "Big Hives," "Small Hives," "Yellow Queens," "Brown Queens," "Wax Extractors" (which don't extract), "Smokers" just a little change from some other, but not worth lighting. Tell W. Z. that fish bait is an invention as old as bee-keeping. You will note I said "of nearly all, etc." Well there are just one or two exceptions to the rule.

Shouldn't speak the .truth at all times, did I hear you say? Harry, Harry, is it possible that you are becoming imbued with the spirit of the evil practices of the day?

Yours as ever,
John Hardscrabble.



THE MOST PROMISING APIARY IN THE WORLD—(PAT'S).

"The tobacco smoke method of introducing queens is giving me better satisfaction again this year than any other method."—Review.

Of the Messrs. L. L. and T. O. Andrews, subscribers of The American Bee-Keeper at Corona, Calif., the Pacific Bee Journal says these gentlemen have harvested about ten tons of honey this year, although the best reports from this section thus far is 20 per cent. of last year's yield. Messrs. Andrews move their bees from place to place as prospects invite, doing so at night.

SECCIÓN ESPAÑOLA.

"The American Bee-Keeper" se envia á principio de cada mes. Si por algun motivo el suscritor no recibe su periodico á su debido tiempo, sirvase notificarnos y les enviaremos otro ejemplar.

Todo asunto relacionado con la Dirección y subscripción á este periodico, debe enviarse á "The American Bee-Keeper, Fort Pierce, Florida. El dinero puede remitirse por giro postal. El giro puede hacerse á The W. T. Falconer Manufacturing Co., en Jamestown, N. Y., cuando convenga más á los marchantes de esa casa.

Cuando el suscritor reciba el periodico con una faja azul es para avisarle que su subscripción termina con ese ejemplar. Esperamos ser favorecidos con orden para continuar la subscripción. Rogamos á nuestros corresponsales escriban los nombres y direcciones bien claro para evitar demoras.

Una faja roja indica que se debe la subscripción y esperamos su pronta atención al particular.

Subscripcion: 50 centavos al año.

MISTERIOS DE LA COLMENA

Guia del Apicultor Cubano.

por el

DR. JUAN B. PONS Y FONOLL

y anotada por el

DR. GONZALO G VIETA.

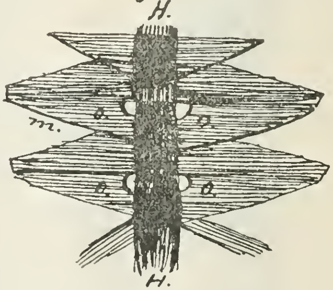
(Continua.)

En la abeja adulta no pueden verse las pulsaciones del corazón, que se notan perfectamente al través de la fina piel de las crisálidas. A los lados hay mûsculos poderosos que forman una especie de diafragma horizontal los que se contraen y ayudan á la circulación.

La sangre no tiene color y casti está destituida de glóbulos y corpùsculos, y Schonfeld ha demostrado que la sangre quilo y alimento de las larvas son muy parecidos.

Los órganos respiratorios de la abeja (Fig. 2.) se extienden por todo su cuerpo y están formados de vasos membranosos ó tráqueas, cuyas ramificaciones se dividen ó penetran en los órganos como las raicillas de una planta se esparraman por el suelo. Estos vasos se unen, de cada lado de la cavidad abdominal, formando un gran saco traqueano variable en forma y dimensiones segun la cantidad de aire que contienen. Las abejas respiran por agujeros ó estígmatas, colocados á cada lado del cuerpo y que se abren en los sacos traqueanos y las tráqueas.

Fig. 15.



Porcion del corazon.
segun Packard.
H. corazon.
m. músculos.
o. aberturas.

Newport ha demostrado, que en las abejas, la rapidez de la respiracion varia entre 20 y 60 por minuto manteniendo el calor en la colmena.

Segun Packard, el acto de la respiracion es producido por la contraccion y dilatacion sucesivas de los segmentos del abdómen. Llenando ó vaciando estos sacos de aire, la abeja puede cambiar su peso especifico.

Cuando una abeja se prepara á volar, el acto de su respiracion se parece al de los pájaros en el vuelo. En el instante que tiende las álas, lo cual es un principio de respiracion, los estigmatas ó agujeros respiratorios, se abren y el aire precipitándose por ellos se distribuye por todo el cuerpo, aumentando su volumen y disminuyendo su peso especifico, aunque, cuando los estigmatas estan cerrados, el insecto, dando su primer golpe de álas es capaz de elevarse en los aires y sostenerse en un vuelo rápido y poderoso sin gran fatiga muscular. El desarrollo del calor en todos los animales depende de la cantidad de aire respirado, de la actividad de la respiracion y del volúmen de la circulacion.

Se ha podido observar, que aun en pleno vigor de salud y juventud, muchas veces las abejas no pueden volar, pues cuando estan espantadas ó atónitas si se las toca con el dedo no hacen mas que saltar. Esta incapacidad para el vuelo, temporalmente, es debida á la pequeña cantidad de aire que sus sacos traqueanos contienen. Estando en reposo, la sangre circula lentamente, y siendo su cuerpo comparativamente pesado y sus músculos distendidos, no puede volar, pero asi que extiende las álas, algunos movimientos enérgicos del abdómen llenan los sacos de aire asi como las tráqueas, que un momento ántes estaban vacios, aplastados, y entonces emprende el vuelo.

En la práctica se vé que se les puede cojer a jarros como si fuesen semillas ó granos, se les puede pesar y medir en vasos abiertos sin que vuelen. La razón de este hecho está esplicada en el párrafo precedente.

Cuando los sacos traqueanos están llenos de aire, la abeja tiene el poder de descargar su abdómen de los residuos que contiene y su conformacion natural las fuerza á elto durante el vuelo. En la Reina no sucede asi, pues ocupando sus ovarios toda el abdómen y no dejando lugar para los sacos de aire, le obligan á hacer sus necesidades dentro de la colmena.

Segun Girard, los dos grandes sacos traqueanos abdominales, que se podrian llamar pulmones abdominales, tienen muchos usos; conservan en reserva el aire necesario para la hematosis, y para la produccion de fuerza muscular y de calor unidos á la potente locomocion del insecto, siendo indispensable este calor libre para mantener la temperatura elevada de la colmena, necesaria para el trabajo arquitectónico de las obreras y la incubacion de las larvas.

Las vesículas aéreas aumentan la resonancia y la intensidad del sonido del zumbido y sirven tambien, á la manera del aerostatico para disminuir ó acelerar el vuelo por variacion de la densidad media, segun su extension y el peso variable de aire que encierran. Este aire acumulado, es un poderoso elemento de resistencia á la asfixia, fenómena que se produce muy lentamente en los insectos. En fin estas ámpulas ó vesiculas de aire tienen un uso anexo á la reproduccion, en el macho ó zángano, pues el aumento de volúmen de estas vesiculas es indispensable para la ereccion del peno.

Dentro de cada estigmata, hay un aparato obturador, necesario para asegurer el mecanismo de la respiracion.

En reposo, permanecen abiertos, pero el aparato obturador interno puede cerrarse á voluntad del insecto, de manera que impide la entrada y salida del aire, asi es, que durante el vuelo, el arre queda, encerrado en los gruesos troncos traqueanos á fin de aumentar la ligereza especifica media. Cuando el insecto cae en el agua, ó es sumergido en gases ó vapores tóxicos, cierra este sistema obturador, de modo que asi resiste á la asfixia.

El órgano sonoro de los zánganos es un velo membranoso colocado entre los borbes de las hendiduras estigmaticas, encontrándose por delante de este aparato obturador, situado á la entrada de la tráquea.

Cheshire nos dice que algunos de los espiráculos ó tubos de aire son tan extremadamente pequeños, que uncuarto de million de estos tubos unidos en un haz, es tan pequeño ó grueso como un cabello, humano.

Estas tubos de aire, recorren cada parte, cada miembra, cada órgano por pequeño y delicado que sea. La abeja respira con regular movimiento, pero en vez de ensanchar y contraer el tórax, alarga ó acorta el abdómen. Observad una abeja detenida en la piquera de la colmena ántes de entrar y vereis que palpita jadeante como un caballo cansado de una carrera. El aire que respiramos está compuesto de tres gases; carbono, hidrógeno y oxígeno. Este ùltimo es el elemento que sustiene la vida, tan bien como la llama del hogar. La vida puede decirse que no es mas que un proceso de combustion.

Continuará.

"Life is a frost of cold felicitie,
And death the thaw of all our vanitie."—Christolero's Epigrams.

THE AMERICAN BEE-KEEPER

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A red wrapper on your paper indicates that you owe for your subscription. Please give the matter your early attention.

Mr. E. A. Johnson, East Pepperell, Mass., writes that the season in his locality has been a complete failure, and that wild aster and burdock are making more of a showing (Sept. 3) than any source since apple bloom. Somehow, the thought of burdock honey doesn't beget a longing to taste it.

The Annual meeting of the New Jersey Bee-Keeers' Association was held at Trenton last week, during the agricultural fair.

The great number of recent renewals received, paying in advance for from two to five years for The Bee-Keeper, is a gratifying index of the way the journal is received by its patrons. We appreciate it, too.

Hon. Eugene Secor, general manager of the National Bee-Keepers' Association, has been appointed by the governor of Iowa, a delegate to the Farmers' National Congress, to be held at Macon, Ga., from the 7th to 10th of this month. We hope to have the pleasure of meeting Mr. Secor during his southern trip.

A very handsome booklet of forty-eight pages, entitled, "Bees in Colorado," has reached us. It was designed as a souvenir of the Denver meeting of the National Association, last month. It is profusely illustrated and artistically gotten up; contains pictures of about all the dignitaries out that way, besides several craftsmen of note, farther east. The credit and our thanks are due Secretary D. W. Working, of the Colorado State Bee-Keepers' Association, who compiled the booklet.

Our Dumb Animals, is the name of a humane journal which comes quite regularly to our office. The powerful influence for good which it must have upon the mind and character of any child, should give it a place in every home where there are children. A monthly perusal of this journal might prove the salvation of many colonies of bees which, through neglect, are left to starve or freeze during the winter, after having toiled all summer to provide honey for their owner's table. Fifty cents, with a request, addressed to Geo. T. Angell, 19 Milk st., Boston, Mass., will bring it every month for a year.

As will be seen by referring to the department of bee-keeping news in this number, Jamaica has scored several points along the line of solving the market problem. The little Island in the sea, having an area considerably less than the state of Massachusetts, now has a corporation with an authorized capital of about $50,000 to look after its honey crops, and their profitable disposition. The new organization, we are pleased to note, has chosen Mr. H. G. Burnet, of Kingston, an old and esteemed friend of the American Bee-Keeper, for its business manager. We trust the company may meet with the success which the enterprise deserves, in floating its stock.

On page 140 of The Bee-Keeper for August, Mr. Reeve's contribution is concluded by an expression of wonder why American supply manufacturers do not list and sell an "improved section," having a split top for the reception of the edge of the foundation sheet. The Philadelphia people may, possibly, find a satisfactory solution of the question as to why this improvement (?) has not been introduced here, in the following paragraph which the Canadian Bee Journal attributes to Mr. J. B. Hall, one of the world's brightest and most successful producers of comb honey, who, having been asked if he had ever used this style of section said: "I am very happy to say that I never did.—With the split bar you have to put your foundation through, and wherever there is beeswax the bees add more to it, and you have to scrape it off. It does very well for the amateur who raises a few pounds for himself and his friends, which do not need any scraping, but not for the professional; his time is too valuable."

Messrs. R. A. Burnett & Co., extensive dealers in apiarian products, of Chicago, under date of Sept. 9, write: "More than ever before, dealers are seeking what they term 'a honey flavor,' as they say their customers demand more than a pleasant sweet taste in honey." This "honey flavor," so much desired by manufacturing confectioners and bakers is generally more pronounced in the darker than the light grades of honey. The light sample of honey having a delicate, or mild flavor, so universally sought for table use, lacks the chief requisite of the manufacturer. They are looking for a honey flavor that will come through the boilers and ovens manifesting the unquestionable flavor of genuine honey in the manufactured product as it is dealt out by the retailer to his patrons. Will not Messrs. Burnett & Co., or other dealers kindly inform our readers as to the source of the honey which affords to the greatest extent this coveted quality? It would be interesting to learn from what flowers it is gathered.

Pat, the expert manipulator of bees, theories and promises, who was due to begin a season's engagement in Cuba last month, with his unparalleled aggregation of 800 to 1000 colonies, where he goes to put to shame the would-be lightning operators of that land of summer and insurrections, is still on the Indian river, Fla. He informs The Bee-Keeper that he has deferred the move until October, in order to have more congenial weather. We predict that it will be even later, before the Cubans will be honored with his presence—though he says not. Pat has learned from Rambler's letters in Gleanings, that a space of nine miles exists between the apiaries of Mr. Moe and the Rambler, in Cuba, and says he, "That space was left purposely for me. I'll move direct from Havana to that field; begin at once to rear queens and increase my bees. Why, with such a honey location as Rambler describes, I can increase to 1000 colonies, quick." Pat says he knows Rambler, personally, very well, that he's a good fellow, and that just as soon as he gets his bees liberated in Cuba, he will go at once and see him. After this projected meeting, we think the Rambler will require at least one cork-soled shoe, if not two, and "Somerford" will get a rest. Pat is somewhat of a talker himself. Our staff artist has sketched Pat's apiary on Indian river, which is under course of preparation for the Cuban trip. We present it elsewhere in this number.

"A carload of honey has been shipped to the National Tobacco Company (trust) of Lousville, by A. Gregory. The use made of the article is in the manufacture of certain kinds of plug tobacco.—Redlands (Calif.) Citrograph.

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HONEY AND BEESWAX MARKET.

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No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy white," "No. 1, dark," etc.

New York, Sept. 8.—Fancy comb honey brings 16 c; No. 1, 14 to 15c. The demand is good, with fair supply. Beeswax, 27 to 28c and dull, with fair supply. We invite correspondence with holders of comb honey.

Francis H. Leggett & Co.

Buffalo, Sept. 8.—This market has somewhat improved of late for fancy one-pound sections of comb honey, which sell mostly for from 15 to 16c. Other grades range from 14 to 19c as to quality. We advise moderate shipments at this time. Extracted honey not wanted. Beeswax (fancy) we quote, 32 to 33c. Batterson & Co.

Kansas City, Sept. 8.—One sale of 35,000 pounds was made at $3.00 a case of 24 sections. The demand for comb honey is good, with supply light, selling at 11 to 13c. Extracted, 5 1-2 to 6 1-2c. There is a good demand for beeswax at 30c with light supply.

Hamblin & Sappington.

Chicago, Sept. 9.—Comb honey is beginning to come forward, and is meeting with a fair demand. The prices at present are 15 to 16c for best lines of fancy No. 1. Other grades are wanted at 2 to 5 cents less, but they are scarce. Extracted sells at 6 to 8c for white, according to kind and quality. Five and a half to 7 c is obtainable for the amber grades. Beeswax is scarce and brings 30c. R. A. Burnett & Co.

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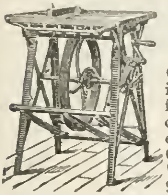

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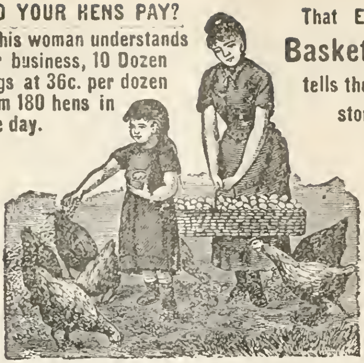

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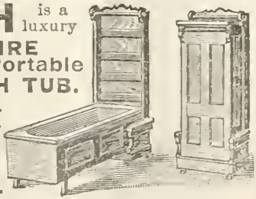

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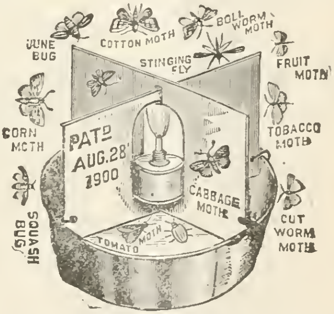

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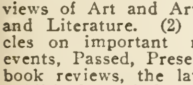

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THE AMERICAN BEE-KEEPER

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A DAY WITH MR. POPPLETON.

The Editor Is Entertained at the Bee Camp of a Popular and Progressive Apiarist.

(H. E. Hill).

INDIAN RIVER honey, like Indian river oranges and pineapples, is becoming well known in Northern markets. One of the finest varieties of honey shipped from this section of the country is gathered from the mangrove which grows in great profusion upon the islands. It is this source of nectar which brings Mr. O. O. Poppleton with his bees from his home on the St. Lucie river, every year. For many years Mr. P. has found it profitable to transport his apiaries to this locality for mangrove bloom. The hives are temporarily placed at convenient points on the river bank, and when the mangrove ceases to yield, are again carried abroad of Mr. Poppleton's launch, "Thelma," a commodious craft built especally for the business, and returned to the pennyroyal fields of the St. Lucie, for winter.

It was on a morning calm and cloudless, last July, that the editor, by invitation, went abroad the "Thelma," for a day's outing at Poppleton's bee camp. Those conversant with the habits of naptha launches in general, will readily admit that they are, to say the least, erratic. Thelma, however, seldom objects to her captain's orders, and we were very soon ruthlessly disturbing the placid waters of the river, from which stately groups of tranquil palms mirrored near the banks, and it was not long until the hum of bees announced the proximity of the apiary, which lay hidden behind a dense growth of vines, palms and other shrubbery. As we hauled alongside the improvised wharf naught but a white tent near the landing marked the location as one of such activity.

This juncture recalls to mind Mr. Poppleton's assistant, Mr. Geo. Saunders, Jr., a rising young apiarist of no mean promise, a subscriber to the Bee-Keeper and a member of the National Asociation, who really seems hardly less important in the conduct of the Poppleton apairies than the veteran bee-keeper himself. George hopped upon the dock and started for his coon trap. He had him all right, but he proved to be an opossum, and the misery which the poor fellow was suffering as a result of terrestrial life, steel traps and boys, was ended by the mandate of Mr. Poppleton, which concluded the preliminary, and the day's business was proceeded with.

In the palmy days of Jones of Beeton, that worthy was wont to liken the Quinby hive unto an infant's cradle, by way of contrast with his own model, short and deep. If D. A. were to walk down a row of hives of the Poppleton style, they would probably suggest so many coffins, to his mind. They are of the style known as the "Long Ideal," and present a strange appearance to one accustomed to the Langstroth pattern. The brood nest is kept in the center of the hive, and the surplus extracted from frames at the ends. Only one end is extracted at a time, and they are taken alternately—first one end and then the other in each successive extracting. Mr. Poppleton is not so particular as are some people in regard to the percentage of capped honey. He is guided rather by experience than cappings as to when the honey is in a fit condition for the extractor. Some honey without a sign of capping has better keeping qualities than others all of which is sealed.

Mr. Poppleton's system of colony record is simple, yet elaborate. Hieroglyphics are not employed, and one conversant with the management of bees will readily recognize most of the abbreviations used. It is all done upon the side of the hive with a lead pencil. Owing to the fact that the hives set very low, it requires some experience and practice to make entries that are legible, without standing on one's head; but Mr. Poppleton has become proficient in the work. Bottles are used instead of bricks or hive stands in these temporary locations, to set the hives upon. They were scattered about in great numbers, and seemed to serve the purpose very well. They were of a substantial kind, rather pretty in shape and uniform in size. We wanted to inquire as to the source of the supply, but upon second thought decided that it might be improper to do so, and suppressed the desire. The water-drinking habit, that is, when carried to excess, in a hot climate is detrimental to health, and upon this pleasant occasion we were provided with an abundance of refreshing drink, which was by no means straight water. Lemons in abundance were gathered from the over hanging branches of wild lemon trees about the apiary; and with numerous barrels of pure honey at hand we were supplied with the best sweetening in the world for a lemonade. It was but little trouble and no expense at all to make up a few pailfuls as it was required. Surely, with such delicacies at our finger ends, direct from Dame Nature's own ranch, we were in a position to enjoy the day, as we did, heartily.

POPPLETON'S LANDING.

Mr. Poppleton is not one of the class of bee-keepers whose chief aim in operating is to find short cuts and quick methods of doing things. His gait is easy and assuring. He knows what to do, and goes about doing it in a methodical style that suggests thoroughness in its accomplishment. During the hot weather he takes frequent rests, leisurely sips his lemonade and is always ready to discuss any apiarian question; being especially well informed on historical points relating thereto, but never wearies his audience with tales of the great amount of honey extracted in "one hour, twenty-two and a half minutes." He is not in the lightning class; but, nevertheless, year in and year out can very likely show results that will favorably compare with most of those whose chief pride is in doing a lot in "little or no time." The comparison suggests the tale of the tortoise and the hare; and Mr. Poppleton, "gets there, just the same."

MR. POPPLETON IN THE APIARY.

At noon we repaired to the cabin of the Thelma; the coffee pot was placed upon the stove and forthwith Mr. Poppleton proceeded to demonstrate his asserted claim that we were lying directly over one of the best pools for fish. The hook baited and cast over the gunwale, Mr. P. settled himself upon a campstool to resume the story of four-cent honey, which had been under consideration, and wait for a "bite." "Yes," he continued, "Morrison's little story of the insignificance of West Indian competition, is nice to read, and plausible; but all such arguments fall flat in the face of statements from Northern dealers which I have recently received, to the effect that our honey can not be sold at this time for four cents a pound, because of the great amount of Jamaican honey in stock." The absolute worthlessness of such talk in the journals was just beginning to create an impression upon his listeners, when, with a vigorous "swash" as it parted the waters and started for the sea, the fish-line drew our attention, and Capt. Poppleton's chain of thought was rudely severed, as he proceeded to alternately pay out and houl in, hand over hand, with the dexterity of an Isaac Walton, notwithstanding the numerous protestations and instructions showered upon him by his assistant apiarist. Gradually the runs of the big fish became shorter, until the mottled sides of a ten-pound Jewfish came to the surface of the deep blue brine and over the gunwale of the launch; and for a time gave the impression of its having come abroad for the purpose of "clearing the ship," so forcible were its bounds and flops. By this tme, the coffee pot was singing, and the repast was spread. It was interesting to listen to the history of the solar wax extractor, and how the use of the sun's rays under glass, in extracting honey from the combs, had led to the present device now so universally used for extracting wax. Mr. Poppleton has in use a "solar" built upon the original plans, as first used by himself; and it is his opinion that the majority of solar extractors are sadly wanting, by reason of the meagre area of glass surface. Relying solely upon our memory of the device there seen, it was a box quite forty inches square, with the top entirely covered with glass; while the tin upon which the combs were placed was, approximately, 18x24, and the receptacle for the wax was placed inside the box, so as to keep the melted wax at a high temperature; thus allowing all foreign matter to settle or rise to the surface, as dictated by its specific gravity. The melted wax is then dipped carefully into moulds and set outside to cool; and as there is no sediment to clean from the bottom of cakes of wax thus made, and the fact that before moulding it is kept at a high temperature, beautiful cakes result.

During the excellent flow of honey then on, Mr. P. was extracting in an open tent. The process being as follows: With wheelbarrow and carrying box handy, as shown in our small engraving, the hive was opened and a frame removed. After dislodging the greater part of the adhering bees by shaking, the frame is rested upon the other frames, while Mr. P. at the right and his assistant at the left, each provided with strong feathers, quickly brush the bees into the hive. By thus brushing both sides at the same time, there is little chance for dodging from side to side, and it is readily cleared, and passes to the hands of the assistant, who places it in the carrier while another is withdrawn and treated as before.

Mr. Poppleton has a home-made uncapping device which works very satisfactorily; being a box of the same size as the hive, the frames, when ready for the extractor, hang nicely within, so that all drip falls into the cappings and passes through a screen upon which the cappings rest, and into a tank below which is provided with a gate for drawing of the accumulation of honey. It is mounted at a convenient height for the operator, upon legs. This Mr. Poppleton calls the "decapper," a very convenient and significant appellation. Here is, obviously, an opportunity for those who seek to improve the bee-keepers' vocabulary. Decapper should supercede "uncapping can," or "uncapping box."

Mr. Poppleton uses no tank. The honey is transferred from the extractor directly to the barrels which convey it to the markets, a modus operandi which may not be unsuccessful in such skillful hands, but which the novice should not attempt.

Fort Pierce, Fla., Oct. 18, 1902.

"Official figures at the Chamber of Commerce show that there were about 100 cars shipped from San Deigo county last season, says the Julian Miner, in reference to the output of honey from this portion of California.

Putting Up Extracted Honey for the Retail Trade. □

(By R. C. Aiken.)

Delivered at the Denver Convention of the National Bee-Keepers' Association.

WITH many this is a burning question. For several years there has been a subdued and smoldering fire going, sometimes a good sized smoke and considerable darkness, now and then enough light to let us see what the smoke was about. Well, I think there has been some of the brethren around poking the fire to make the blaze shoot up on high so that those at a distance could see, and I have a suspicion that that Irishman and Stone man from Toledo, Ohio, assisted by that other Irishman from Flint, Mich., has been putting up a job on me. Just think of it, after all the rumpus I have had with the Ohio Fowls and others, then to cap the climax ask me to treat this subject before this body of the wit and wisdom of the land, and me to prepare in advance what I have to say and send a sample of the whole thing to that Chicago Irishman so he could come prepared to lick me. But, brethren and sisters, I am still up on the "ridge pole" and as happy as an owl, and I will bet that I can fight just as long in this high altitude as all three of the other Irishmen, so up goes my sleeves and now watch the sparks fly.

You want to know how to put up extracted honey for retail, do you? Well, ask Yor-rick; he will tell you to find the Root of the matter in his catalog printed down at Medina, and when you have found that the price of one pound glass jars is almost four cents each at New York, Philadelphia and Cincinnati, and even four cents each at Indianapolis, just send in an order and put your honey up in these. Jones pays the freight on these jars, and stands breakage, of course the supply dealer could not do it. You see that your honey is thoroughly liquid, if any granulates, melt them, and as the wholesale price of extracted honey delivered in Chicago is five to six cents—call it six, then deduct three-fourths of a cent a pound for freights (that's the car rate to Chicago), and another three-fourths for cans in which to ship it, then 5 per cent. commission which is three-tenths of a cent, then allow two-tenths of a cent more for freights on the package (cans and boxes) and for postage, collections etc., and you have just four cents left as the worth of your honey. We mean that when honey delivered from Denver to Chicago brings six cents there in car lots it is worth four cents at your honey house. Put the four-cent honey in the four-cent jar, then add one cent for the freights you paid on the jar, and one cent more for your trouble in filling and boxing these jars for shipment, and you have a net price of 10 cents as the cost of your honey ready for the railroad—four cents for honey and six cents for the other things.

Let me tell a little story. Once on a time there was a great hooting by one of the big owls down east, just to scare some of the other tribes out west. Well I just thought I would try an experiment and see if high-priced, glass-packed honey in the lower altitudes was a myth or not, so I sent some honey into,—well away beyond Chicago, with instructions for the receiver, who was an honest man, to sell it and after paying himself, freights, etc., to send me the balance; and, sir, not one cent came back.

If you live near a big city and have wealthy and stylish customers who do not care for price, so the honey looks nice through clear glass and costs more than common people pay for it, pack it in glass every time and stick on the price. I have figured it was worth at your honey house in those jars, 10 cents each. You are catering to the users of luxuries, and as luxuries do not sell so well because the consumers of them have other luxuries of many kinds and are a set of dyspeptics and eat very light at best, and because luxuries are always uncertain of sale and subject to fluctuations, you ought and must have a good commission to pay for insurance, taxes and your own trouble and risks. You should add about 40 per cent. for your profits, another 40 for the retailer and others, and say 20 per cent. for the railroads and carriers; this will make the honey sell at 20 cents a pound and upward. This is for the small per cent. of the very wealthy who do not eat much honey because they have so very many other good things.

If you have to sell to people like yourself who have to work on from $200 to $600 salaries and economize very closely to make ends meet, they cannot and will not pay 15 cents for glass and things to get five cents worth of eating, and for that trade you must put up your honey so as to get it to them with the least possible expense for fancy wrappings. They want something to put to their ribs and to keep the babies from actual starvation. This is the big—let us spell that with capital B, I, and G—class of consumers. Put their honey into common lard pails, wooden or pasteboard boxes, paper bags or some other cheap way so it carries the goods to the consumer, or some other cheap package that will get the goods there cheaply yet neat and clean. If you want to sell lots of honey at retail, just cater to this trade and you will enter a field that is as wide as the commercial world, few competitors and a vast hord of hungry mouths. Do not go on trying to feed and stuff the wealthy who are already too full, but reach out to the middle and lower classes who must of necessity look twice and think many times before buying a useless and expensive piece of glassware to get a little sweet. Not one in 100 have any use for the glass bottle after the honey is out of it. Some tell us these packages are valuable after the honey is out of them, but I tell you that very few of those who do and who ought to consume honey, such as the very wealthy who live in brown stone fronts, and the laborers who have not a fruit tree to their name, would or could use empty honey jars, that argument does not go where proper intelligence prevails.

Then, too, honey in glass is and must be fancy, it will not hold its place unless it is. It must be put up so that it will remain liquid and clear, which means an expensive bottling plant such as the ordinary bee-keeper cannot have. Or, in lieu of this the goods must not get beyond the immediate neighborhood of the producer or packer; for he must exchange or reliquefy when it candies or gets cloudy. The great producing districts are altogether too far from the consumer for this taking back method;

and, even if close, it is a very unsatisfactory and expensive plan and cannot prove practical with one producer in 100—for general results it is a mere makeshift.

I do not deny that there is a demand for fancy goods put up in fancy style, such has a place; but, that such is practical for the average producer, and for the wholesale producer in the average locality I do most emphatically deny. Give me 100,000 pounds of No. 1 extracted honey to pack in lard pails before it has had time to candy the first time, and I will guarantee to sell it within a year and get better prices than can be had for the same honey in five-gallon cans, and better prices than can be had for the same in glass outside of the limited fancy city trade. When I say better prices remember that I do not mean that the gross price will be more, but I do mean that the producer will net more out of his crop, also mean that the goods will reach a field that is neglected, and where it will do the most good to suffering humanity.

But some honeys will not candy freely and quickly, which is the misfortune of those who have such. it will not be long until many will be hunting methods by which to cause rapid and complete candying, which probably will not be a serious problem. We want the honey to candy quickly and solid, be packed right into the retail package from the settling-tank, and the package to be the very cheapest that will successfully carry the goods to the consumer at a minimum of cost. At the present time lard pails and paper bags are the most feasible thing available until something better is invented. This may seem strange to many, but the proof is in the eating of the pudding, and I have partaken thereof. To get into the fore front of the battle is to be a target for the bullets of the enemy, but it is good for the cause. Every good thing has to run the gauntlet of criticism and meet with opposition, and the lard pail, paper bag candied honey scheme is and will be no exception to the good old rule.

In short, extract your honey into the big—yes BIG honey settling-tank, from the tank draw it into nothing more expensive than tin, that which will candy into pails and that which will not candy into sealing packages, and then put it into the hands of the retailer, and it is bound to sell. Every package must have printed instructions for liquefying, and the producers or packers guarantee. Put out nothing of which you are ashamed or unwilling to back up.

Now brethren, pile on a few more sticks to the burning, let us have a big fire and warm up to the subject, hew to the line and make the chips fly.

Loveland, Colo.

NOTES AND COMMENTS.

An Interesting Batch of Items Gleaned from the Foreign Press.

(Adrian Getaz).

LAYING WORKERS.

QUITE a discussion concerning "laying workers" has been running in some of the Belgian papers. Some of the best writers deny the existence of them and claim that the presence of drone brood is due to small queens raised by the bees from larvae too old to give a fully developed queen. The articles are too long to be quoted, but it seems clear that in some cases, at least, the brood is due to such queens rather than laying workers.

In one case a colony of laying workers was united with one having a good queen. The most remarkable feature is that the worker-laying continued during several days after the uniting.

WORKING THE RIETSCHE PRESS.

A novice in apiculture, somewhat self-conceited, thought he would make his own foundations. He went to a neighbor and borrowed a press. The neighbor offered to give some information as to its use, but Mr. Novice declined, he didn't think he needed any—not he.

Well, home he went. He knew how waffles are made and thought that would be the way to make foundation. A piece of hot bacon was procured, the press well greased, the melted wax poured in, and the press closed.

Next thing the press would not open. A chisel or something like a crowbar was used to force it open. An hour or two later a brother bee-keeper found

Mr. Novice trying to clean the wax from the press with his penknife!

AGE OF THE BEES.

The "Abbe" Collins was, during the last century, one of the leading writers of France. When the Italian bees were first introduced, he took advantage of it to discover how long worker bees live, in summer especially. A great many are destroyed by birds and insects. Many perish when caught by a storm or heavy rain. A large number have their wings torn accidently or worn out and can often be seen crawling on the ground in the apiary. In the winter, they rest and do not wear out so much.

Mr. Collins in the "Guide du Preprietaire d "Abeilles" thinks the population of a colony is renewed once between October and April and about three times during the summer. An Italian queen was introduced in a black colony the 26th of September, 1862. By the 11th of April, 1863, the black bees had entirely disappeared.

Mr. A. Wathelet introduced in September, 1901, a five-banded queen in a black colony. On July 25, 1902, there were yet a number of black bees. The new queen was not very prolific and the colony did not build up well. It was the only black colony in the apiary, it could not be said that these black bees came from outside. Here it is admitted that the bees in summer live only six weeks, that is a much shorter period.

According to my own experience this length of time may be too short. I don't bother my brood nests very much, and some are not opened from one end of the year to the other. Sometimes a queen is lost during her wedding trip and I fail to notice it. Often in such cases, I have found a fair amount of bees three months after the swarming occurred. That may not be very conclusive because the queenless bees may possibly not work as actively and therefore not wear out as rapidly as those provided with a queen.

SIZE OF SWARMS.

A box hive was to be transferred. The bees, however, swarmed the day before. The swarm weighed five and one-half pounds which would gve about 25,000 bees. The old colony transferred the next day gave less than one and one-half pounds which would give about 7,000 bees. There was enough brood to fill four frames 12x12. The conclusion was that, 7,000 bees may be enough to care for that amount of brood at least.

IN THE OPEN AIR.

The 11th of August a swarm was found hanging under a cherry tree limb. Five combs were already built, the center ones about eight inches long. Three of them contained brood.

DEATH OF MR. DUBINI.

Dr. D. Angelo Dubini, the leading apiculturist of Italy, died at the age of 89 years, from the effect of a fall which he sustained in his house. During 38 years he was attached to the Grand Hospital at Milan. In 1868 he founded the Apicoltore and has written for that paper until his death. His extracts from foreign papers were much appreciated. He has also published an Apicultural Guide in Italian, considered the equal of any in the world.

SAINFOIN.

The sainfoin, also called esparcette or bourgogne (the botanical name is Onobrychis sativa), has been extensively cultivated in Europe for forage, or, rather, hay since 1629, according to agricultural authorities. It is regarded as the equal of red clover and alfalfa. It is not so difficult as alfalfa by any means; but requires limestone or limed ground with a permeable subsoil as it has very long roots. Hard grounds should be subsoiled as deep as possible. It lasts a number of years.

The best part of it is that it is one of the best honey plants known. The honey is light amber and in taste the equal of white clover. Still better, it is at its best for hay when cut at the end of the blossoming season. This insures a crop of honey, wherever the sainfoin is used. Sooner or later American farmers will find that to give the best hay, the alfalfa should be cut just before blooming, and that source of honey will then be lost.

Like all the other legumes, the sainfoin improves considerably the land on which it is raised.

Knoxville, Tenn., Oct. 1, 1902.

Selling Extracted Honey at Wholesale—How to Get Best Prices.

(By J. F. McIntyr).

Delivered at the Denver Convention of the National Bee-Keepers' Association.

I BELIEVE the president and secretary have deliberately and with malice aforethought run me up against the hardest problem in apiculture, agriculture, horticulture or any other producing business that is not a monopoly. I have only agreed to write a paper, however, not to solve the problem.

The statement, "To him that hath shall be given," etc., still holds good, only it should be made plainer. To him that hath money shall be given a high price for his produce; and from him that hath not money his produce shall be taken at a very low price, is the saying up-to-date. I believe that this law is as inexorable as fate when the words "at wholesale" governs what is said. A poor bee-keeper could peddle his honey, and sell directly to consumers who do not know his weakness at a good price; but the large producer cannot do this; his honey must pass through several hands to reach the consumer, and the price is governed by the market.

It is said that "All things come to him who can wait." Ah, there is the rub; how can a man wait with hungry mouths to fill, and interest gnawing at his vitals. I have before me San Francisco prices current, dated July 4th, 1902. Under Honey it says, "Buyers and sellers are too far apart in their ideas of values for much trading." Do you know what that means? It means that the men who have honey to sell now in California can wait. If there was one man who could not wait the buyers would get his honey at the present low price.

I don't know a single neighbor bee-keeper that has his last year's honey crop on hand now. They have all sold at a low price to speculators. Only a small part of their honey has reached the consumer; the remainder is in the hands of strong men who bought it at a low price and are holding for a high price.

At our conventions the question is often asked, "What are we going to do with the small producer who is too weak to hold his honey and breaks the market?" I always look at the questioner to see if he wants to kill the small producer, let the speculators eat him up, or organize him. The question has never been answered to the satisfaction of every one present, but nearly all seem to feel as if the man had done wrong by selling so cheap. The big-hearted man with the love of humanity thrilling his breast, gets up and says, "We really must organize these poor fellows so they will be able to hold their honey for a better price." The stoic gets up and asks how much longer 100 of them could hold than one. if they were all in the same fix, and must have money. The dealers would laugh at such a weak corner on honey, and wait a very short time until it went to pieces. The "Bulls" must have real strength. Bellowing and pawing the dust does not scare the "Bears" very much, so the organization fails to make its corner effective, the officers are blamed, and things are in a worse shape than they were before.

Is there no hope then for the man who is too weak to hold his crop? Yes, there is still hope.

The citrus fruit grower of southern California have done much to solve the problem. Their product was perishable and could not be held, no matter how much money they had. Their business got in such bad shape that they were receiving expense bills instead of returns for carloads of oranges shipped East. They had to do something or quit the business, and they did it. They organized to sell their fruit and get honest returns. They placed agents under bonds in every large city in the United States. These agents kept the head office in Los Angeles posted, and pushed the sale of fruit. Eleven million dollars worth is now consigned to these agents annually, and honest returns made to the grower, and the average of citrus fruits doubled instead of declining.

This organization, The Southern California Fruit Exchange, has been so successful that they have all become co-operative cranks, and now propose to give other producers, who are too weak to maintain agencies of their own, the benefit of their agencies to sell their products. The weak bee-keepers in this "neck o' the woods" may now organize and market their honey at any time of the year, through these agents. The producers are finding out that the consumers are paying a good price for all the honey they use. The speculator, who is always a "bear" to the producer and a "bull" to the consumer, has overreached himself, and the bee-keepers now have an avenue through which they may market their honey without letting it pass through his hands.

Sespe, Calif.

THE USE OF STARTERS

And Their Influence Upon the Natural Utilization of Wax—Source of Discoloration in Combs, Etc.

(Arthur C. Miller.)

AMONG the tenets of good bee-keepers there has long stood almost unchallenged the belief that unless bees were given a chance to build comb wax was lost; this being particularly the case when swarms were hived on combs instead of starters.

Nature never wastes and products that are not used in their legitimate channel either are used in others or reverting to their elements pass into compounds. But neither does Nature produce more than is necessary for the best accomplishment of ends. In other words, and as applied to bees, animal life is so adapted to normal surroundings that, that is not produced which is not utilized. With this in mind I have made experiments to see how far our methods of keeping bees forced them from normal conditions and habits as regards wax production and utilization.

A swarm when hived on empty frames or starters gathered in a compact mass, generate much heat and convert into wax the honey and pollen in their stomachs and honey sacs. The combination of food, heat, moisture and inactivity are necessary to the highest production of wax, and under any other conditions it is produced sparingly and with exceeding slowness.

That much was readily determined and it settled the question as to whether wax was saved or lost by hiving swarms on starters or combs. In localities where short and heavy flows of honey are the rule it is, of course, better to hive swarms on starters, putting the supers above with an excluder between. But that is a matter of honey and not of wax; though experiments indicate that more honey will be secured where the bees have one comb in the brood nest. Such a comb gives the queen room at once and the bees seem inclined to bend their energies more to honey gathering than wax secreting.

I next turned my attention to the loss of wax through scales dropping to the floor and being swept out. Loss by such channels is more apparent than real. Some scales are brushed out with the dirt and excrement which accumulates on the floor, but most of the scales are picked up and utilized. Comparatively few scales are dropped however, the average from normal swarms hived on combs or starters, when reduced to wax, will not be one-half teaspoonful per colony.

HOW COMBS ARE DISCOLORED.

In conducting these experiments I was surprised to see the large quantity of faeces passed by a colony. It has been claimed that bees never pass dry faeces but always excrement in fluid form. Such belief is erroneous, as any one may see if care is taken in looking. It is the dry faeces which, together with pollen, make combs black and which discolor the cappings of honey when left on too long. Not a pleasant thought, but true nevertheless.

Providence, R. I., Oct. 12, 1902.

One of the largest honey dealers in the United States, located in New York City, sends this month a quotation of the honey market in which appears this line: "Southern honey in barrels, 4 1-2 to 5 1-2 cents per pound." We are very much disinclined to admit any such misleading and insignificant quotation to our market column. "Southern honey" is no more specific in designating quality than would be "Northern," "Western" or "Eastern" honey. This unjust manner of quoting is a relic of days gone by; there are too many progressive producers of honey in the "Southern" belt today to admit of the degrading inference, and The Bee-Keeper declines to serve as a medium for conveying the insult.

OUR CORRESPONDENTS

Asylum, Pa., Sept. 28, 1902.

Editor Bee-Keeper.

Dear Sir:—I have read many 1902 honey crop reports, and most of them at the opening of the honey flow—like "counting chickens before they are hatched." What I appreciate is a report after the season has closed.

I like topics in season, not out of season; for instance, now is the time to learn how to prepare our honey for market and our bees for winter quarters, and not next spring. Furthermore I would like to see reports on crops from established apiarists, not from beginners.

Just one more and I will get to my report—I would like to see the latest market reports to be had during the selling season.

This is said to be the banner honey and wax producing section of this state. It's not much now, if that be true, for the last two winters have wiped out more than one-half the bees. I think it is a fact there was more nectar this year than any in my five years' bee-keeping.

The old bee-keeper got but little honey, but the up to date man has a good crop.

From 85 colonies, spring (May 15) count, I increased to 130, and took 5,000 sections; and the frames have enough for winter.

If this don't find the waste basket, I may come again and tell how I do some things.

D. C. Bacon.

Cienfuegos, Cuba, Oct. 7, 1902.

My Dear Mr. Hill:

Your favor of the 17th ultimo received yesterday upon my return home from the apiaries. I am very busy at present, starting another apiary of 200 colonies in El Valle del Infierno, four miles distant from the Excelsior apiary. The honey crop is at hand. Since the 2nd instant I have been extracting every day. Though the aguinaldo (bell-flower) does not bloom until November, there are now a great many trees and vines of other kinds in full bloom. We hope for a wonderful honey crop this year, in this country. I think it is a great mistake that we Cubans are obliged to send our excellent honey to Germany instead of to the United States. Fraternally yours,

Dr. J. B. Pons.

Sta. B., Toledo, O., Oct. 10, 1902.

Editor American Bee-Keeper,

Dear Sir:—I have received the following notice. Will you please insert it in the next issue of the American Bee-Keeper?

Yours very truly,
A. B. Mason.

Streetsville, Sept. 19, 1902.

Dr. A. B. Mason,
Sec. Nat. Bee-Keepers' Association.

Dear Sir:

I am directed by the executive committee of the Ontario Bee-Keepers' Association to extend to the officers and members of your association a very cordial invitation to attend the annual meeting of the Ontario B. K. Assoc. at Barrie in early December. The dates not being finally set we cannot be definite but hope to soon know, when we will advise you.

We look forward to having a very pleasant meeting.

Yours truly,
W. Couse, Sec'y.

BEE BREVITIES

Foul brood is said to be on the increase in the southern portion of Ireland.

England and Scotland have joined in the general chorus, and from the apiaries of the British Isles goes forth the cry, "Another short crop!"

"There is an apairian proverb which says: 'Year rich in honey, poor in swarms; year poor in honey, rich in swarms.' "—Colmenero Espanol.

"Bisulphide of carbon will not only kill the larvae of the bee moth, but it will also kill the eggs. At least this is the conclusion of most of those who have used it."—Bee-Keepers' Review.

A corporation, with an authorized capital of $50,000 has been organized in California, to produce and market honey. The new organiaztion has its office in Los Angeles, with B. S. K. Bettett as president and general manager.

"It is possible that clipped queens are superseded sooner than those that are not clipped, but the probability is that some have been lead to think that clipping leads to supersedure simply because clipping marks the queen so that they know it when they are superseded."—Review.

"I can buy queens for 60 cents, but I don't believe the breeder can give us all good queens for 60 cents. We should not encourage that kind of business . . . I think if queen breeders would sell none but tested queens, it would be an advantage to bee-keepers at large."—E. T. Abbott.

From a report of the last meeting of bee-keepers there, by the Canadian Bee Journal, it appears that cedar bark is the favorite smoker fuel with the Canucks. Some, however, use and prefer planer shavings, and still others, old sacks. The latter, if thoroughly dry, is a fuel hard to beat.

In dealing with robbers, "a remedy that has been successful with us in the worst cases," says the Rocky Mountain Bee Journal, "is to saturate a cotton rag with a dilute solution of carbolic acid and lay it at the entrance of the hive that is being robbed. The robbers will summarily leave in great disgust, never to return."

"Blake & Jefferson, Safford's enterprising bee-men, have constructed on wheels a machine for the extraction of honey. They intend moving it from place to place, where it is needed. A glance at it yesterday moving east along Tenth street and turning the corner into M street, looked for all the world like an electric car.—Pacific Bee Journal, Los Angeles, Calif."

THE Bee-Keeping World

GERMANY.

The well known Emil Hilbert celebrated his 50th anniversary as a bee-keeper July 15, 1902. Hilbert discovered early in the seventies that the bacillus alvei could be killed with salicilic acid. This was the beginning of the foul brood-cure. Hilbert was the first to use milk and egg for feeding bees in the spring, thus bringing his colonies to an astonishing state of populousness and general prosperity. He was and is yet a diligent student and careful experimenter; received many honors from his own and other governments. Homage has been paid him by the bee-keepers of many lands. The Bienenvater gives his portrait and a reproduction of a photo. of his apiary.

The September number of Leipziger B. Z. is filled with advertisements offering Carniolan and Heath-bees, naked swarms weighing from four to six pounds, young queen included at 3.50 to 4.50 mark.

The practice of watering bees inside their hives is considered beneficial by

German authorities. K. Toenges, however, says in Gravenh, Ill. B. Z. that the taking of liquids into the system is largely habit which could be overcome. (This is true with man, why not with bees? American bee-keepers do not water their bees and still are successful).

A. Kiefer believes it within reach of possibility to produce a constant red-clover strain of bees, although this idea is generally ridiculed by the Germans. Kiefer thinks the Italian and Carniolan bees are to furnish the material for such a strain as both of these races are known to work on red clover. The breeding should be done in an isolated yard where the flight of drones should be controlled. The Carniolan race should furnish the drones.

Dumler proposes to open a department in the Luxemb. B. Z. in which bee-keepers may tell from month to month of the new things they have been humbugged with. He enumerates among such, certain patent hives, entrance-slides, and a steam-wax press. (I could enlarge upon the list, I am sorry to say. Several hundred dollars would be in my pocket if it was not for that experience).

Otto Schulze is probably the most extensive comb foundation manufacturer in Germany. He produces half a dozen different styles, among which is one-sided foundation with metal back. This is used princpally for the production of the thick heath-honey so difficult to extract. The high speed necessary to throw it out of the comb would cause ordinary combs to break out. His regular wired foundation is becoming more and more popular. How extensive his other makes with veneering and wire gauze partition is used I am not informed. The Schleswig-Holstein B. Z. speaks of Schulze's drawn comb as a master piece of mechanical perfection. The depth of cell of these combs is 18 millimeter. The bees, it is said, use them readily for brood rearing or storing honey.The drawback is, that the comb has to be cast right in the frame. This, it would seem, makes it expensive. I believe the bees can draw our comb from ordinary foundation cheaper than man can do it.

Wehl reports unfavorable results (Schleswig-Holstein B. Z.) in trying to unite after swarms with prime swarms; the bees of the former being killed and thrown out. (I find that usually there is trouble when prime, and after swarms go together; but a great deal depends upon locality, honey flow and time of the year.)

AUSTRALIA.

Rumler writes, in Bienenvater of the bees in one of his eight colonies carrying into their hive small bundles of stamens. The bees carried them in their mouths. The same bundles were cast out the next day but examination showed their being minus the pollen they contained when carried in. Klossel has observed a case of like nature.

The month of July has been the honey month in Austria. May and June have disappointed the bee-keepers generally, not only in Austria, but Germany and America also.

SWITZERLAND.

According to Revue Internationale Gubler had had a queen bee in one of his hives which laid only sterile eggs. They neither produced workers nor drones. (The writer had such a queen some years ago. She filled the combs with eggs, but none ever hatched. Finally the queen disappeared).

F. Greiner.

The Bee-Keeper learns wth regret of a misfortune which recently befell Mr. Thos. Chantry of Meckling, S. Dak. The house in which the greater part of his 1902 crop of honey was stored, without insurance, was destroyed by fire, entailing a loss of several thousand dollars. Mr. Chantry is an extensive honey producer, and, fortunately, has taken some fall goods since the fire. He gets from 12 1-2 to 16 cents a pound for his honey wholesale. His average per colony this year was about 60 pounds; and of this the greater part was burned.

We always may be what we might have been.
—Adelaide A. Proctor.

The Seasoning Series

By Deacon Hardscrabble

Dear Brother Hill:

"I must have liberty
Withal as large a charter as the wind,
To blow on whom I please"

and if I blow dust in your eye think o' the beam in your neighbor's. So also doeth that ubiquitous "world" boiler of yours, but if ye have any consideration for him ye'd better let on to him to go easy in his raillery agin comb foundation in box honey, and the "gobs" it makes. The whole blessed lot of manufacturers, their satellites and hangers on will wipe the "world" up with him. Nigh on to two pages of such condemnation did the reckless boy have in the Review. Oh yes, he's right enough; but gosh! d'ye spose the name of Greiner will save his scalp? "The truth," ye know, "should not be spoken at all times"—it may hurt the "elect." And "the greater the truth the greater the libel" so let him be keerful.

I 'low as Nim Crinkle had a better line on the in'ards of things than did the old Deacon, and Nim, you may remember, said there was an unholy, close corporation a-runnin' of the whole shebang.

Well Harry you see I'm a-gettin' old—tho by the way you're a consumin' of time jest as fast as I be—and these undercurrents sometimes evade me. I thought as how as I'd get to go to the convention and drop onto some of the wire pullin' but the trip was too much for me.

What d'ye think of Catnip for honey? Goin' to try it on a large scale? Wal sir, I reckon you won't unless you can write your name Vanderbilt Rockyfellow. The catnip seed market was cornered long ago. Don't believe it? Huh, just try to buy live seed reasonable like. How do I know? Wal, I'm old, but not dead yet. I'll send to those of my friends who'd like to try it small packets of seed at two bits the package—while they last. For your own information let me say that that price nets nigh eight hundred per cent. profit, and the supply is big enough to last as long as is seemly, b'gosh!

Fact is Harry, this climate is all fired debilitatin' and I want to buy a farm in the north woods and I reckon this catnip fad will fetch it. Think I won't sell enough seed for that? Say, you're slow. Why next fall I'll advertise for Catnip Honey in my own patent sections and so get two booms. These 'ere bee chaps are "easy," dead easy.

Let me give you a pointer: If you want to win out do the oldest tricks in the newest kind of ways.

I 'low as how the great showman was dead right when he said "the American people like to be humbugged." Humbugged—he must a had bees in mind.

Yours as ever,
John Hardscrabble.

Dr. J. B. Pons, author of "Mysteries of the Hive," now running in the Spanish department of the Bee-Keeper, has his home in Cienfuegos (meaning, in English, a hundred fires), and is establishing an apiary of 200 colonies in El Valle del Infierno—Hell valley. The doctor must be calculating to avoid any chances of loss by chilled brood.

SECCIÓN ESPAÑOLA.

"The American Bee-Keeper" se envia á principio de cada mes. Si por algun motivo el suscritor no recibe su periodico á su debido tiempo, sirvase notificarnos y les enviaremos otro ejemplar.

Todo asunto relacionado con la Dirección y subscripción á este periodico, debe enviarse á "The American Bee-Keeper, Fort Pierce, Florida. El dinero puede remitirse por giro postal. El giro puede hacerse á The W. T. Falconer Manufacturing Co., en Jamestown, N. Y., cuando convenga más á los marchantes de esa casa.

Cuando el suscritor reciba el periodico con una faja azul es para avisarle que su subscripción termina con ese ejemplar. Esperamos ser favorecidos con orden para continuar la subscripción. Rogamos á nuestros corresponsales escriban los nombres y direcciones bien claro para evitar demoras.

Una faja roja indica que se debe la subscripción y esperamos su pronta atención al particular.

Subscripcion: 50 centavos al año.

MISTERIOS DE LA COLMENA

Guia del Apicultor Cubano.

por el

DR. JUAN B. PONS Y FONOLL

y anotada por el

DR. GONZALO G VIETA.

(Continua.)

El aparato digestivo es muy interesante. Despues de la boca, que describiremos detalladamente al tratar de la obrera, sigue la garganta ó faringe y luego el esófago el cual se dilata para formar el saco de miel y el verdadero estómago, y de aqui sigue el intestino separado en dos porciones, el ileo y el recto que termina en el ano. Unida á la boca estan las glándulas salivares las que segregan un liquido viscoso que en las larvas se transforma en hilo con el que tege el capullo. Como se verá mas tarde, estas, glándulas son muy complejas y la funcion de la secrecion muy variada. A los lados de todo el canal alimenticio, existen glándulas mucosas que segregan un fluido viscoso que sostiene el tubo blando y promueve el paso del alimento.

El verdadero estómago (Fig. 32. d.), es muy muscular y en su interior se segrega el jugo gástrico que diluye el alimento para que pueda ser absorvido y pase del canal alimenticio á la sangre.

Unidos y adheridos á la porcion inferior del estómago hay numerosos tubos urinarios, que algunos han llamado tubos biliares. Siebold cree, que algunas de las glándulas mucosas segregan bilis y que otras actuan como páncreas.

El intestino es corto y poco mas largo que el abdómen. Las heces fecales en la abeja, son líquidas.

El aparato sexual de la Reina, que en parte hemos descrito Fig. 9, consiste en los ovarios. el espermateca. los oviductos, la vagina y la vulva. Los ovarios son tan grandes que casi ocupan todo el abdómen. Los tubos, ya descritos, son muy numerosos. mas de cien, mientras que el espermateca es bien visiblo. Este consiste en un saco membranoso de 1-20 de pulgada de diámetro; está completamente cubierto de filetes nerviosos entrelazados y tiene un corto conducto al que se unen las dobles glándulas apendiculares que abrazan el espermmateca.

Siebold y Leuckart que lo describieron, suponen que tales glándulas segregan un fluido mucoso que hace mas movibles las celdas espermáticas de modo que se muevan con mas libertad.

Tambien describen músculos que unidos al conducto del espermateca actuan como esfínteres ó dilatadores de este conducto á fin de detener ó permitir el paso de los espermatozoos. Cuando el conducto está abierto. la siempre activa celda espermatica sal ayudada en su carrera por la secrecion mucosa de las glándulas mencionadas. Segun Leuckart el espermateca puede contener 25,000,000 de espermatozoos.

Los huevos son un poco mas largos, de 1-16 de pulgada ligeramente encorvados y mas delgados por el extremo en que se unen al fondo de la celda.

La membrana exterior aparece celular y demuestra el micrópilo en la extremidad mayor.

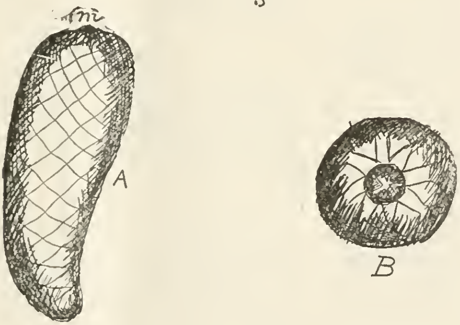
La posesion de los ovarios y de sus anexos es la peculiaridad caracteristica que determina la Reina de las abejas como la única fecunda y madre de la colmena.

Además, hay otros caracteres que diferencian a Reina de las otras abejas, que son dignos de mencionarse.

La Reina es mas larga que los zánganos y que las obreras, pues tiene 7-8 de pulgada de largo.

Los órganos de la boca estan menos desarrollados, sus mandibulas son mas débiles, con dientes rudimentarios y su lengua ó ligula, asi como los palpos labiales y maxilas son mas cortas. De los cuatro pares de glándulas, la Reina tiene el primer par muy rudimentario y los otros bien desarrollados. Los ojos tan grandes como los de la obrera, son mas pequeños que los de los zánganos y los tres ocelos estan situados entre y encima de los ojos compuestos.

Fig 17.



A. huevo
m. micrópilo

B. extremidad
mayor del huevo

Las álas son relativamente mas cortas que las de las obreras y zánganos y en vez de alcanzar el extremo del abdómen, alcanzan solo el tercer anillo.

Aunque la Reina tiene la tibia y tarso de la pata posterior caracteristica, no tiene la cavidad y los vellos que la rodean formando el cestito de pólen de las obreras. Las patas de la Reina son largas y fuertes, pero como su cuerpo, son poco velludas, vellos que se distinguen perfectamente en las obreras. Sus movimientos son lentos.

La Reina posee un aguijon que es mas largo que el de la obrera pero es encorvado hácia la punta y solo tiene tres ganchitos mas cortos. Raras veces usa la Reina su aguijon, solo cuando lucha con sus rivales. El cerebro es mucho mas pequeño que el de la obrera, pues sus funciones son vegetativas; la Reina pone huevos y la obrera se dedica á todos los trabajos de la colonia."

Segun el profesor A. J. Cook la Reina pane cerca de 3000 huevos diarios, que pesan 0.3900 miligrama, mientras que ella solo pesa 0.2299 miligramo, asi es que la Reina puede poner diariamente casi doble de su peso en huevos.

Hoy está probado que muchas Reinas en circunstancias favorables ponen 3.500 huevos en 24 horas durante la estacion de la abundancia y Mr. P. Bois, de Jersey asegura que una de sus Reinas puso como 5.000 huevos en 24 horas. Por mi parte he visto, en mi colmena de observacion, á una Reina Ytaliana importada, poner seis huevos en un minuto, lo que haria un total de 360 huevos por hora, ó sean 3.600 en diez horas ó 4,320 en doce horas.

Si consideramos que un huevo tarda 21 dias en desarrollar una abeja perfecta y si suponemos que la Reina ponga solo 3.500 huevos diarios, necesitará un número de celdas igual á: 3.500x21 ó sean 73.500 celdas.

(Continuará.)

Levity in behavior is the bane of all that is good and virtuous. Seneca.

THE AMERICAN BEE-KEEPER

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H. E. HILL, - EDITOR.

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Advertisements must be received on or before the 15th of each month to insure insertion in the month following.

Matters relating in any way to business should invariably be addressed to

THE AMERICAN BEE-KEEPER,
Falconer, N. Y.

Articles for publication or letters exclusively for the editorial department may be addressed to
H. E. Hill,
Fort Pierce, Fla.

Subscribers receiving their paper in blue wrapper will know that their subscription expires with this number. We hope that you will not delay favoring us with a renewal.

A red wrapper on your paper indicates that you owe for your subscription. Please give the matter your early attention.

Editorial

A too prevalent error among bee-keepers is the robbing of colonies of their stores. Indiscreation in the matter of taking honey from the hives, we believe, is responsible for the loss of more bees than the ravages of all diseases combined.

A fair crop of fine honey is reported by our readers in the Boise river region of Idaho.

Beyond the banks of ice and. snow another springtime awaits the Northern bee-keeper.

Editor Hutchinson, of the Review, wants someone to formulate and submit a working plan for co-operative marketing. Here is the opportunity for some bright fellow to distinguish himself.

We are in receipt of a business communication, postmarked, "Cudahy, Wisconsin," without either date or signature. We shall have to wait patiently until our correspondent "calls us down" for negligence.

The trip recently taken to the Denver convention seems to have wonderfully dilated the comprehension of some, in regard to the magnitude of the world; yet, we understand there is still a portion lying even beyond Denver.

At the Denver convention, Mr. Hutchinson was re-elected president; Jas. U. Harris, Grand Junction, Colo., succeeds Mr. Hershiser as vice president, and Geo. W. York, Chicago, captured the secretaryship.

The past season in Ireland is characterized as "disastrous" by the Irish Bee Journal. "Failure, such as the longest memory cannot recall from bygone years." With such general reports of failure and small crops, better prices should result.

Any of our readers having experience with a Carniolan-Italian cross, are invited by a western subscriber to tell us something of their characteristics. "How about their swarming propensities, the amount of brood comb to give them, etc.," are questions of particular interest to our correspondent.

We call the attention of our readers to the cheap advertising column which begins with this number. If you want to buy, sell, exchange, beg, borrow or give away anything, this department will enable you at at trifling cost to state your case to at least five thousand readers of The Bee-Keeper.

The big catnip balloon seems to have been pierced quite early in its vigorous flight by the snag of personal investigation. It is disappointing to be obliged to pursue old channels in quest of forage so very soon after having our catnip enthusiasm wrought to the extent of ecstatic anticipation; but it now appears that we shall have to come to it.

To those favorably situated for the production of comb honey, and having some knowledge of the business, this branch offers inducements for which the extracted specialist need not hope. Prices and demand, for some time past, lend encouragement to the production of more comb and less of extracted honey.

Mr. Geo. W. York, who was recently elected secretary of the National Association, has becomingly withdrawn his candidacy for the position of general manager of the Association, and through his publication, the American Bee Journal, says: "Please don't vote for the editor of the American Bee Journal, as he is not a candidate for any office in the National Association." That's a very proper and wise decision, which The Bee-Keeper commends.

Editors Root and Hutchinson stopped off at Humboldt, Neb., to look into the catnip business, when returning from the big convention. The latter, spent several days with Dr. Gandy, drove all over the country with him, discussed the catnip question from subsoil to bloom, luxurated on catnip honey and sipped the doctor's catnip tea; and now the October number of the Review (which it not yet out at this writing) is to be a catnip special.

For securing broken combs, or in transferring, strings, fine wire, wooden slats, etc., are usually recommended. These have to be tied, twisted or nealed, as the case demands, and are awkward. A little "kink" in regular use in Mr. Poppleton's apiaries, we consider quite noteworthy: A box in the tent, or honey house, always contains a good supply of wire clamps; which are simply a piece of stout wire cut one inch longer than the frame in use. A half-inch at each end is bent at a right-angle. These slip firmly over the frame, and readily support any part of a comb that may need holding in position. They are instantly adjusted, always at hand, simple, inexpensive, and a great convenience.

One of our readers thinks it strange that we should publish without comment statements from our contributors which are "obviously misleading if not untrue." The columns of this journal are open for the expression of opinions relative to questions in which bee-keepers are interested. If any reader desires to take exceptions to any idea expressed, he is at liberty to use the same columns to do so. It is not for us to exclude all matter with which we do not agree; nor to discourage by comment the free expression of ideas. The editor is but one man, while the readers, all of whom are invited to participate in the discussion of any question eliciting their interest, number into the thousands. It should be understood, therefore, that because any idea is published in these columns, is no reason for supposing the editor takes any stock in that idea. Let the reader who objects to any particular article freely assert his objections. The American Bee-Keeper is simply a medium for the dissimination of ideas relating to our art or industry. To set in judgement upon the thoughts of thousands, separating the good from the indifferent or bad, it a task too great; and one for which perhaps no individual is fitted.

ORGANIZATION.

"I firmly believe that we are upon the eve of the next great stage in apiculture, viz., that of organization: particularly as it may be applied to the marketing of our product," says President Hutchinson of the National Association, in his journal, the Bee-Keepers' Review. He says, in substance, that we need a leader—some one to formulate and submit a working plan by which the entire honey crops of the United States may be handled on a co-operative basis.

This appears to be a problem "one too many" for the honey producers of this country; though it seems that there should be lots of men in our ranks quite equal to the requirements. The difficulty is, each one is waiting to have another act in the matter. If any one of the experienced organizers, who has had experience in the management of capital, were to be appointed to the task, there is little doubt that a plan which, with some amendments and modifications, would well serve for a beginning, at least. Take, for example, B. S. K. Bennett, of California. How long does the reader suppose it would take him to Morganize the world's apicultural interests? Nothing of this kind is desirable, however. Such a man as General Manager Secor, of the National Association, is eminently capable of drafting a safe and practicable working plan; and there are others, doubtless, not less competent. While there are numerous minor details to be dealt with in the formation of such a scheme, the problem is confined to the simple matter of marketing our honey. It is neither a very gigantic nor complex undertaking, the consideration of which resolves itself into the simpler problems of transportation, storage, distribution, etc.

Of course, any attempt at thus bettering the bee-keepers' condition, presupposes their desire for improved conditions, and consequently their interest and hearty co-operation in perfecting such a plan.

N. E. FRANCE FOR GENERAL MANAGER.

The following, received from Secretary A. B. Mason of the National Association, is worthy of careful study and thought by those readers who hold membership in that organization:

Editor American Bee-Keeper:

There is now practically no nomination for successor to Hon. Eugene Secor as general manager of the National Bee-Keepers' Association, to be elected next December, and after consulting with some of our leading bee-keepers at the Denver convention, and since, it has been thought best to nominate Mr. N. E. France, of Plattville, Wisconsin, for the position, which I now do.

Not having an intimate personal acquaintance with him, I have taken pains to make inquiries regarding his fitness for the position, and find that he is a thoroughly honest and capable business man; in the prime of life; temperate in all his habits; is accustomed to speak in public has labored inceasingly, and unselfishly in the interest of bee culture, having spent considerable money and time in the interest of his chosen pursuit securing the passing of laws in the interest of bee-keepers and preventing the passing of such as were opposed to their interests.

He is one of the speakers at Farmers' Institutes, often neglecting his own business to work in the interest of bee-keepers. He manages several apiaries and has produced hundreds of tons of honey. For several years he was secretary of the Southwestern Wisconsin Bee-Keepers' Association, and for ten years was its president. He was for seven years secretary of the Wisconsin State Bee-Keepers' Association, and for four years has bees its president. He secured the passage of the Wisconsin Foul Brood law, and is state inspector of foul brood.

I know of no one in our ranks better fitted to fill the office of general manager of the National Bee-Keepers' Association than is Mr. France, and I hope he will receive the hearty support of the members at the election in December next.

A. B. Mason.

Sta. B., Toledo, O., Oct. 6, 1902.

The American Bee Journal for Sept. 25, presents a picture of the apiary of Mr. Wm. H. Horstmann, of Chicago, which is something of a novelty. In the foreground is shown a hive, which is nothing less than the national capitol building, at Washington, in miniature. Mr. Horstmann, who is a government employe, constructed this wonderful hive himself; and the effect is to give his lawn the appearance of a young Washington. Other things in sight make plain the fact that Mr. Horstmann is an up to date bee-keeper; while our subscription book attests the fact that he is away ahead of date in some things, at least.

In great attempts it is glorious even to fail. —Longinus.

HONEY AND BEESWAX MARKET.

WASHINGTON GRADING RULES.

Fancy.—All sections to be well filled, combs straight, of even thickness and firmly attached to all four sides; both wood and comb unsoiled by travel stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy white," "No. 1, dark," etc.

New York, Sept. 8.—Fancy comb honey brings 16 c; No. 1, 14 to 15c. The demand is good, with fair supply. Beeswax, 27 to 28c and dull, with fair supply. We invite correspondence with holders of comb honey.

Francis H. Leggett & Co.

Chicago, Oct. 9.—The advance noted in our last quotation has been maintained and there is a very good demand for honey at the present time. No. 1 to fancy white comb brings 15 to 16 cents per pound with the lower grades selling at from 2 to 3 cents less; this includes the light amber. Dark grades of amber sell at about 10 to 11 cents and buckwheat 9 to 10. Extracted is steady with white bringing 6½ to 8 cents, according to color, flavor and quality. The ambers bring from 6 to 7 cents per pound, dark 5½ to 6 cents. Beeswax in good demand at 30 cents per pound.

R. A. Burnett & Co.

Buffalo, Oct. 8.—Buffalo honey market has considerably improved lately and we believe moderate shipments will do well. Strictly fancy 1 pound comb selling at 15 and 16 cents. Commoner grades selling from 14 down to 10. Extracted is not wanted except in small tumblers about $1.25 to $1.50 per dozen for strictly pure.

Beeswax wanted at from 25 to 33 cents per pound as to quality.

Batterson & Co.

Kansas City, Oct. 9.—Good demand for comb honey with light supply, at 11 to 14c. Extracted. 5½ to 6½. Beeswax at 30c. is in light supply with good demand. Very little comb or extracted honey on the market. Stock is well cleaned up. We look for higher prices.

Hamblin & Sappington.

Cincinnati, Oct. 13.—The demand for extracted honey in this market is good, and finds ready sale as follows: Amber, 5½ to 6 cents. White clover, 7 to 8 cents. Beeswax, 28 cents. We are cash buyers.

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Cent-a-Word Column.

It frequently occurs that some member of the Bee-Keeper family desires to advertise for sale some article the value of which will hardly justify the payment of our regular rates; and yet it would be an accommodation if he were permitted to tell others what he has to offer. Some other reader may be in need of just such an article as that of which he wishes to dispose. Again, it is as frequently desired to exchange commodities for which we have no especial use, for something more desirable, and such exchanges are often made to mutual advantage. We have, therefore, decided to place at the disposal of our readers a column devoted to the accomplishment of these ends; though we cannot be responsible for any possible dissatisfaction which might arise as a result of such exchanges. The rate will be uniformly one cent for each word, each month; no advertisement however small will be accepted for less than twenty cents, and must be paid in advance. Count the words, and remit with order accordingly.

WANTED—To sell for cash, several barrels of light amber, extracted honey. For particulars, address, Honey, care Bee-Keeper, Ft. Pierce Fla.

WANTED—To exchange six-month trial subscription to The American Bee-Keeper for 20 cents in postage stamps. Address, Bee-Keeper, Falconer, N. Y.

AGENTS WANTED to sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Jamestown, N. Y.

FOR SALE—A Hawkeye, Jr. Camera Complete. Uses both film and plates. Cost $8.00, will sell with leather case for $3.50 cash. Address Empire Washer Co., Falconer, N. Y.

WANTED—To exchange two-ounce samples of wild pennyroyal honey for samples of like size of white clover, basswood, alfalfa or sage honey. Address, H. E. Hill, Ft. Pierce, Fla.

WANTED—To exchange fine golden or leather-colored Italian queens for an old-fashioned straw skep. Queens will be mailed from the South at any time. Skep wanted at once. Address, Lock Box 38, Ft. Pierce, Fla.

A TANDEM BICYCLE (for man and lady) cost $150, in first-class condition, was built to order for the owner. Tires new. Will sell for $25 cash. Satisfaction guaranteed. Address J. Clayborne Merrill, 130 Lakeview ave., Jamestown, N. Y.

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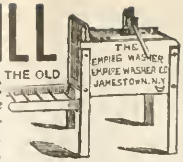

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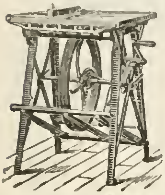

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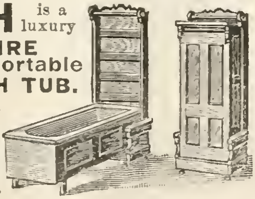

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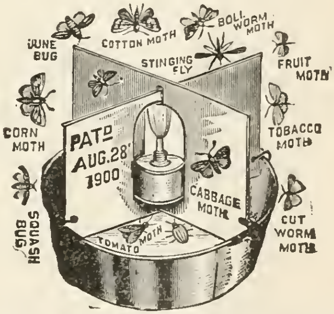

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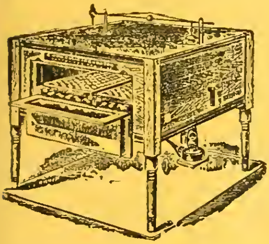

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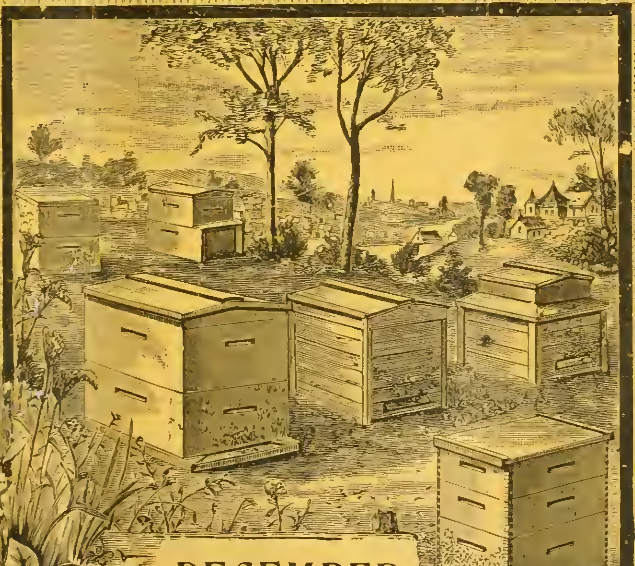
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DECEMBER

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VOL. XII NO. 12

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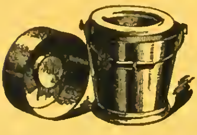

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Thin Flat Bottom Foundation
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Being the cleanest is usually worked the quickest of any foundation made. The talk about wiring frames seems absurd. We furnish a Wired Foundation that is Better, Cheaper and not half the trouble to use that it is to wire brood frames.

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There is not room here to say very much about the back numbers for this year, but I will mention one prominent feature of each issue.

JANUARY is a Colorado number; six pages being devoted to a beautifully illustrated "write-up," by the editor, of that paradise for bee-keepers. This issue also shows how to make a cheap hive-cover that will neither split, warp, nor leak, in any climate.

FEBRUARY contains the beginning of a series of articles by M. A. Gill, who last year managed 700 colonies of bees, and produced nearly two carloads of honey. These articles are written from the fullness of his experience.

MARCH has an article by S. D. Chapman, on "What Makes Bees Swarm, that I consider the best I have seen on the subject. It gets right down to the foundation of the matter. In fact, so thoroughly does Mr. Chapman understand the matter that he has so made up a colony that one half would swarm, leaving the combs deserted, while the other half would not budge.

APRIL ushers in some typographical changes. The smooth, shiny, glazed paper was laid aside for a soft white paper that gives to printing a clean, tasty, tempting look. The frontispieces are printed in colors instead of somber black. The cover is of Court Gray printed in two colors—Umber and Milori blue.

MAY contains a five-page review of a book by E. A. Morgan, entitled "Bee-keeping for Profit." It was rightly named, the author getting right down to basic principles, and giving the chit of profitable honey production, particularly in the Northern States.

JUNE shows how a man may practically defy foul brood; how he may keep bees in a foul-broody district, all surrounded by diseased colonies, yet keep his apiary so free from it and its effects as to secure a good crop of honey each year.

JULY has an excellent article by Mr. Gill on the management of out-apiaries for the production of comb honey, showing how the work must be generalized, yet systematic, and done just a litttle ahead of time.

AUGUST illustrates and describes the handiest and best bee-tent for circumventing robbers that I ever saw. It also has an article by Mr. Boardman on "shook" swarms, showing how we may practically take swarming into our own hands.

SEPTEMBER illustrates and describes a cheap but substantial bee-cellar, built something like a cistern with a roof over it. This issue also gives some of the best papers read at the Denver convention, together with a lot of interesting items picked up at that convention.

OCTOBER gives a three-page illustrated write-up of Dr. Gandy and his artificial pasturage. While on his way home from the Denver conventon the editor of the Review spent three days with Dr. Gandy, using his eyes, ears, and camera, and this write-up is the result. If you want to know the truth of the matter, read this issue.

Remember that each issue contains dozens of interesting and instructive items aside from the ones mentioned.

Send $1.00, and the back numbers for this year will be sent at once, your name put upon the subscription list, and the Review sent to the end of next year.

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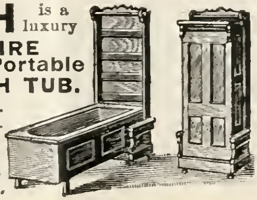

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THE AMERICAN BEE-KEEPER

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Vol. XII DECEMBER, 1902 No. 12

"SHAKEN" OR "BRUSHED" SWARMS.

Interesting Experiences and Observations of a Bee-Keeping Lady. Also Something About Clipping Queens, Florida Ants. Etc.

(Mrs. Sarah A. Smith.)

QUITE a bit is being said these days in our bee-papers about brushed, shaken, or shook swarms. I am surprised that it seems new to any up-to-date bee-keeper. I have used the method for ten years, and in some cases nothing answers better. But when you hear some one say, to brush all the bees off of the combs, and set them aside until enough young bees hatch out to take care of the brood, then you should use a little of your own common sense, and do nothing so foolish. At least, that is what it would be, if done here.

Every natural colony of bees I have ever examined, always has brood in all stages of development. Now, if you take all the bees away, the brood must suffer before enough young bees will be hatched out to go on with housekeeping. And is it well to keep food from the unsealed brood for so long?

Then, even in our warm climate, I do not believe it would be warm enough for the brood. And last but not least, with us, just as soon as the combs were freed of the bees; the ants would start in, and clean out all the brood, and honey. We have ants for all things. Some only eat sweets, others only meat; between them all, they very soon clean up anything they can get at, so you would lose all the brood left without bees to protect it: I think too, that other places may have as many ants as we do here; so I say, lookout for your brood, as it is too valuable to throw away.

I have always found this way of "swarming" very useful when a colony does not do as well as others of equal strength are doing. Then I "swarm" them, and tell them to "fish or cut bait."

Then too, it is a very good way to get good worker combs. Have good young queens, put empty frames between drone combs, so they will build straight and take out your drone combs and keep putting in empty frames and you will get better worker combs than if you used foundation.

I have four out-apiaries with no one to hive swarms if they should come out when I was not there. So without this artificial swarming (that is my name for it) I don't know how I could take care of so many as I do without loss.

I use the brood to build up good working colonies. I would rather have fifty thousand bees in one hive than in two, and that is the plan I work on.

Of course, no one, I should think, would do this swarming when there is no honey. Don't get the idea that your bees are lazy, for as a rule they are as anxious to work as you are to have them; but I have often thought that in very poor times, bees get hopeless, just like we all do. You should never let them get so poor, for it don't pay in pennies, and it makes you feel very mean, which is worse. If the honey flow came to a sudden stop after I had "swarmed" some colonies, I would give back brood and honey, for bees are like people, they must have some good reason to stay in a place happily and contented, and I suspect that the ones who have had their swarms leave for parts unknown have forgotten this fact. Only "Pat's" bees can thrive on air.

A funny thing happened to me last spring. I read one evening G. M. Doolittle's article on clippng queens in Gleanings, and as each point in favor of clipping came up, I, like the three good school trustees, nodded my head and thought "Them's my sentiments too," and rather patted myself on the back and thought "Sally, aren't you glad yours are all clipped."

Well, next morning my daughter reported a swarm. I went out and looked to see where it had come from, and soon I found the hive with the queen in front dead, with about one hundred meat-eating ants stinging her and trying to move her to their nest. I looked and thought of the evening before, and could only sit down on a hive and laugh. As you perhaps know, Mr. Editor, such subjects for merriment are the only ones we Florida bee-keepers have had for some years.

I still believe in clipping all queens, but scald your ant nests before swarming time.

I also believe that Mr. Doolittle is the best bee-keeper of us all. There is good hard common sense in all that he writes or does. May he live long and his bees always find nectar.

But, Mr. Editor, you don't know how you make me tremble for yourself at times. When the other editors are throwing each other bouquets of forget-me-not, aren't you afraid that they may get hold of some of A. I. R's. cabbage or potatoes and throw them your way? You do say so much right out in meeting, and J. Hardscrabble don't help you to keep quiet, either. Do let me give you some motherly advice, be careful, if not for your own sake then for ours.

Grant, Fla., Oct. 16, 1902.

Like Mr. Somerford, of Cuba, Mr. Albert Gale, of Australia, thinks the cement or concrete bottom for hives quite the proper thing. Their durability is, of course, the chief claim of merit.

MERITS OF QUEENS.

Suggestions of a Careful Observer in Regard to the Qualities of the Mother Bee, and their Relation to the Honey Yield—Statements of a Misleading Character Overhauled.

(Arthur C. Miller.)

IN the Bee Keeper for October, page 181, at the foot of the second column, appears this paragraph, apparently written by the editor: "The writer has received a queen by mail at a cost of $1.50, whose colony filled over 200 one-pound sections, and that in a season when no other colony in the yard gave over 80 pounds."

This was called forth by some of the recent statements regarding the relative value of queens. The remark was timely, but was too broad, and without explanation or modification may be the basis of error.

Except where the surplus crop comes late in the season the progeny of a queen purchased that season seldom has much to do with influencing the amount secured by the colony in which she is. In the northern states few queens are received before May 15, and at the best very few are introduced and laying before then. Allowing thirty days from egg to the field bee, how many workers from the new queen are likely to be of value in the gathering of a white clover crop? But suppose for the sake of argument that the new queen is introduced and laying by May 1st, and that she quickly reaches a high rate of production. If such is the case she may have put a considerable number of bees in the field by June 15, but the bulk of that colony at that time is composed of bees from the original queen, and the majority of them are under thirty days old. Allowing sixty days as the average life of the workers, it will readily be seen that from a third to a half of the crop is all that should be credited to the new blood. But it is folly to attempt to say that the large crop was really due to that source.

Mr. Hill, I believe, is well aware of these facts, as are also other thoughtful and observant bee-keepers, but many persons are not, particularly the novices, and such unqualified statements as in the paragraph noted, and many of which slip into the papers, lead them astray.

All the habits peculiar to a strain of bees cannot be determined in one season, and it is unfair to the breeder and also to one's self to condemn a strain on the showing of a queen tested but one season. There are many things which combine to make a colony profitable or a failure, and so subtle are many of the factors of such combination, that it is at present practically impossible to determine the proportion each bears to the whole. The work of a colony composed of two strains of bees, as in the above supposed case, cannot be forecasted. The elder strain may be exceptional field workers and the younger strain exceptional housekeepers, and if the proportions are right at the time of the honey flow, the results will be very gratifying; but should the traits of the strains be the reverse, the colony would probably be classed as a failure, and either way the queen would be held accountable under the prevailing custom of judging.

Again, the elder strain may be exceptionally good nurses and so give to the offspring of the new queen a start and vigor they would not possess if cared for by their own sisters. Such a factor should be considered when weighing the value of a new strain.

Nurse influence, within certain limits, is indisputably a factor to be considered. Of course in a general way good bees are good all around, and poor bees are poor, but the goodness or poorness may lie in functions which we quite overlook.

After all, Mr. McIntyre's way of testing strains is, thus far, ahead of any other: It is to put into ten or more colonies queens of a given strain and compare the work of the whole group with that of the rest of the apiary. Such a comparison of averages is worth something.

Providence, R. I., Nov. 7, 1902.

HONEY.

The Importance of Maintaining a High Grade. Suggestions on the Market Problem.

(F. Greiner.)

IF we will take the pains and canvass our great big country, we will find that about every railroad station has its produce buyers. Nearly all things the farmer produces, grows or gathers is bought up for cash by them—except honey.

President W. F. Marks has labored hard for years to convince the bee-keepers that honey should not be shipped to commisson men, but sold outright instead. He thinks this would give a steadier tone to the honey market. Probably it would, but I am afraid this thing cannot be brought about in the twinkling of an eye. It will take time for the honey buyer to develop. He is surely coming. Evolution will bring him forth. In the meantime we will have to do the best we can according to the conditions that surround us and exchange our product for the desired cash, following our best judgment.

The average honey producer can usually produce better than sell. If this was not so, we would not find so much honey in the hands of commission men. It is my opinion, the commission man is all right; he has served a good purpose and is still continuing to do good. On general principles I believe in specializing; the producer to produce only, the salesman to sell only; but in case of the honey-producer, it seems, an exception may be made. The bee-keeping specialist's time is not fully occupied. There is a time when the work with his bees is not pressing; this time he may well devote to the sale of his crop.

I am aware that many bee-keepers have some other business beside caring for bees, and many of these will undoubtedly continue shipping their honey to commission men. But if we all follow this practice, the city market will be over-supplied, as it has in the past, and the consequence is: prices will drop. In fact, we know they have dropped. The store-keepers in the small towns know this. They are just as well posted on the prices of products as other people and so we have low prices everywhere.

The remedy seems very simple: Keep the honey out of the city market as much as possible. Then the price cannot help getting back where it once was. This, however, means making more sales in the home market. I know from my own experience that every bee-keeper by a little effort on his part could greatly increase the consumption of honey in his own vicinity, if he will go and see the people in their own homes, talk honey and bees, show photos of his apiary, his honey extractor while being operated by him, etc. This interests the people and gives confidence. If one wants to sell comb honey to his townsmen, let him produce it without comb-foundation. One friend told me recently he got so that he would eat his comb honey with a spoon, digging it off from the foundation leaving this article untouched. Comb-foundation does not improve the quality of our comb honey. Editor Hutchinson says in a recent number of the Review, he would pay five cents more per pound for honey produced without its use if he was to eat the honey hmself. Would it not be reasonable to suppose that other consumers are just as sensitive in the matter? Our aim, therefore, should be to please the people by not using comb-foundation in sections. If we succeed we will build up a lasting trade.

If one starts out to sell honey to his townsmen it will be a good thing to also carry extracted honey. I myself am very partial to this kind of honey. I believe it is more wholesome than in the comb. Several years ago I melted up 27 sections in my solar; as a result I have a neat little cake of wax weighing 12½ ounces. It seems to me the human system would have quite a job to do away with the wax where one partakes freely of honey in the comb.

I always try to push the sale of extracted honey wherever I can. But we must produce a good article. Above all things it must be heavy in body. I bought some maple syrup once which was half water—I didn't buy any more of it. For same reason I would not sell water to my neighbors for honey—most, people hereabouts had all they wanted of it this season without buying it.

I make it a rule to let my combs become sealed from top to bottom before extracting. I am then reasonably sure to have good, thick honey. I would rather have my honey off in color than in body. As to allowing the queen to roam all through the hive, I am opposed to it. I want my extracting combs free from brood. If I could have things always just as I wanted them, I would only use clean combs for extracting supers, or such as had not contained brood at any time and were free from pollen. There might not be a perceptible material difference in the honey, but it certainly would be more appetizing to me.

A great many people would use extracted honey if they only knew the article, and it was brought to them. It requires a little strategy sometimes to even induce people to taste of it. They know, of course, what "strained" honey is like; they ate it when their grandfather took up his bees each fall; they don't like it! That is quite natural. All the more I want to be particular with my extracted honey as to eliminating all hive flavor or pollen flavor. The purer our honey is, the more converts we will make.

I tried a scheme at our agricultural fair with good success, and where people are not yet familiar with good extracted honey, it will pay any one to do as I did.

When the crowd began to increase toward the middle of the day, I produced a quantity of nice white biscuits from my lunch basket, and with my honey knife—clean and bright—I cut some of them into slices. I then opened a can of my finest honey and spread a little of it on each slice, using a small silver spoon for the purpose. Everybody was then invited to sample the honey. Hundreds of people undoubtedly had their first taste of extracted honey on those two days I kept up my lunch counter, and many sales were made right there and then. When people become acquainted with a good article of extracted honey, they will often buy it in preference to comb, even at the same price, for it is more convenient to use. The only drawback to handling extracted honey is its tendency to granulate. A few people prefer it thus, and I aim to have it for them, but the great majority of people want it liquid and transparent. It causes a great deal of work sometimes to liquefy honey. We must be on our guard not to have it become solid in our barrels. Before it gets to that point it must be drawn off and melted over a moderate fire. Granulated honey in small glass or tin packages may be liquefied in a solar machine, if one can induce the sun to shine any. In using the sun's heat there is no danger of impairing the quality of the honey or breaking packages. It has given me good satisfaction.

For retailing extracted honey from the store a one-pound package seems desirable. I am in search of a cheaper one-pound glass package than the 25-

cent jar or the Muth square jar, but have not succeeded in finding anything suitable. Generally speaking, I can sell more honey in larger packages, one and two-quart Mason jars, than in the pound packages. I have about concluded to use pint Mason jars for smallest packages in the future.

Naples, N. Y., Oct. 13, 1902.

FASTENING FOUNDATION IN SECTIONS.

Facts About the Split-Top Section—A British Plan Advocated by a Bee-Keeper of Experience.

(John M. Hooker.)

ON page 140 of the American Bee-Keeper Mr. Reeve refers to some remarks that I made at a meeting of the Philadelphia Bee Keepers' Association, as to the ready way in which full sized pieces of foundation could be securely fixed in sections without the aid of melted wax or any special fastener.

In your editorial remarks, page 191, you say "an expression of wonder why supply manufacturers do not list and sell an improved section having a split top." It was simply, to my mind, an improved way of fixing foundation in the ordinary 4¼x4¼ section by means of a bevelled saw cut in which to fix the foundation.

You refer to and quote a paragraph which the Canadian Bee Journal attributes to Mr. J. B. Hall, who having been asked if he had ever used this style of section said: "I am very happy to say that I never did," and gives some imaginary reasons for not doing so. He then goes on to say, it does very well for the amateur who raises a few pounds for himself and his friends, but not for the professional; his time is too valuable. Mr. Hall is satisfied with the plan he adopts, but had he tried the plan suggested, his reply would have been of more value.

In England this method is almost universally adopted by bee-keepers who keep bees for profit and who are as careful of their time, and keep the wood of the sections as clean as any of the professionals to which Mr. Hall refers. I did not recommend this plan without having tried many others, and gave it the preference.

I have kept bees for 50 years, first in Grecian straw hives, Huber hives and then in movable frame hives, as soon as introduced, and have always endeavored to keep pace with the times. I spent the summers of 1893, 1898 and 1902, in the United States, and on occasion visited several apiaries; and I am bound to say that bee-keeping is as well understood both scientifically and practically in Great Britain as in America. Of course honey is not produced to anything like the same extent in England that it is here. In England there are comparatively few acres of land not under cultivation and the wild flowers and other sources from which honey is gathered are much less than here. In this we are handicapped, but the quality of the honey, and manner in which it is put on the market, will compare very favorably with that on this side of the Atlantic.

Philadelphia, Pa., Oct. 23, 1902.

ENCOURAGING FRAUD.

(Old Grimes, Jr.)

"MORNIN', friend Grimes."

"Mornin', Bro. Kleinmacher. I thought I'd come over and ask what you think about Editor Amsterdam's fight agin manufactured comb honey."

"Well, what don't you want to know?"

"Are we fightin' manufacture or adulteration?"

"Why, adulteration of course. You see they lie about making artificial comb, but you can't do it, and folks has offered as much as $1,000 for a pound of it."

"Wal, I vum, so if I get away with a good counterfeit in New York State, these folks will pay me $1,000 for violating the bogus honey law? Guess I'll try counterfeits."

"No—er—ah—not exactly."

"Well, you manufacture foundation out of pure wax and you'd have just as much right to draw the comb, put extracted honey in and seal it over, wouldn't you?"

"Yes, if it wasn't adulterated, then every section would look alike and prove its artificial qualities."

"You're off there Kleinmacher; they

manufacture Turkish rugs that fool the public and they manage to put in the irregularities of the hand-made genuines, so only experts can tell—but the public is fooled."

"Yes, but it can't be done, because it's impossible.'

"Well, supposing that it is in the case of comb honey, how about extracted? There is not a case of manufacture there is there?"

"Excuse me, friend Grimes, I think I hear the horn, and Mrs. Kleinmacher wants me at the house. Come again, Grimes."

"Mornin', Kleinmacher."

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THE CARNIOLAN-ITALIAN CROSS.

Editor American Bee-Keeper:

In response to your call in November issue for information concerning Carniolan-Italian crosses, will say: I have in one of my apiaries side by side five colonies in 10-frame hives, representatives of their respective strains, each having characteristics of their own, and I could not say which I prefer.

First in the row is the Buckeye three-banded long tongue, every bee alike. Next, imported Carniolan, just ended her third season; next the Muth Strain Golden Italian; then two Carniolan-Italians.

It was exceedingly interesting to closely study the nature of each during the last three seasons. Early this spring the first three mentioned started off with the Carniolan, the strongest, the three-banders second, and goldens third. For a time neither seemed to prosper, owing to the very late spring. Then all at once the Carniolans began to increase rapidly, just seemed to boom. It was not long until I gave the other two each a frame of brood and bees from them, to start them agoing, because it was getting late. One could see the improvement in the two, very quickly.

The latter part of May I noticed queen cells in my Carniolan colony, and knowing their willingness to swarm, I quickly changed their minds by making two nuclei, when it was time for mating, placed entrance guards in front of all hives except the three-banders, and I now have two, true to name Carniolan-Italians. Their bees resemble the three-banders, though somewhat darker, and bands more narrow, with characteristics of Carniolans, gentle to the extreme, boil over when you open the hive, and breeders you never had better. It was no time until these two nuclei were as strong as any in the lot, the only thing that prevents them becoming popular, is their swarming propensity. However, I must say, I give them close attention, and seem to catch them in the nick of time, as they have never swarmed for me.

In the fall of 1901 I presented a friend of mine with one of my fine Carniolans, because he was taken with their gentleness, but last August he did away with them, because he said, "that colony swarmed only seven times in less than three months." So it seems I averted their swarming impulse, and my friend failed to understand.

My Carniolan-Italians will always have my closest attention. I find they winter better, and breed up better in the spring.

I help strengthen my weaker colonies with frames of brood, and bees from them.

Please remember that other strains have good qualities these do not possess.

I have often thought if I could combine the good qualities of these different strains, I would have a race, that might be christened, "Eureka" bees.

Yours truly,

Fred W. Muth.

Mr. Jacob Alpaugh, of Galt, Ontario, a Canadian specialist, writes that the past season was too wet for best results. He secured an average per colony of 150 pounds (spring count) and 100 per cent. increase. Mr. A. is making preparations to test a modification of John McArthur's old scheme. He will probably devote the winter months to building up an apiary in South Florida, and take the bees to Canada in early spring.

BEE
BREVITIES

IN AUSTRALIA.

"Springtime is coming;
Just hear its low humming
Off where the blue waters sweep.
Sandled with gold,
It breaks the brown mould,
Waking the blossoms from sleep."

Virgil, it is said, claimed that bees did not live over seven years. There are still lots of people who believe the same thing.

Just at present the business end of bee-keeping, the marketing of the product, is the factor most in need of attention.—Review.

The next convention of the Chicago-Northwestern Bee-Keepers' Association will be held at the Briggs house, Chicago, December 3 and 4.

Who is it that squanders his money on worse than useless patents and fixtures? He who "can not afford" to take a bee-paper.—Prof. A. J. Cook.

We regret to state that our "shadow," who undertook to follow "Pat" into Cuba, was taken ill at Miami, and was therefore unable to proceed farther.

Short cuts and quick methods should not be the chief aim of the beginner. To do well that which is to be done is a more commendable ambition.

In the construction of a solar wax-extractor, the use of the wire-cloth strainer should not be thought of. It is worse than useless; it's a genuine nuisance.

Rev. W. F. Clark, one of Canada's foremost authorities on bees, and of whom James Heddon has said, "he is the ablest apicultural writer in the world," died at his home in Guelph, Ont., Sept. 26.

As the home of short-lived bee journals, Texas easily "takes the bakery." It is said another will soon be launched, and we hope it may be more successful than its predecessors.

Every reader of the Bee-Keeper is invited to put on his thinking cap and go after ideas relative to the co-operative marketing of the honey crops of the United States. "What do you think?"

It is a common practice in some parts of the world to feed a swarm for the first day or two, and it is no doubt a profitable thing to do. It ought to be a good thing for a forced swarm as well.—Dr. Miller, in Gleanings.

A disgruntled fossil out West writes that The Bee-Keeper is "getting too gay." What does he expect of a "young thing," in the best of health and handsomely clad, who is just entering her teens? The Bee-Keeper has no occasion to be otherwise than "gay."

There is no breed of bees which are more hardy than the others. The common black bee, the Italian, the Cyprian, the hybrids between these different races, all winter equally well or badly. We must therefore look elsewhere than in the race for the cause of death or life during the cold winters.—C. P. Dadant, in Modern Farmer.

Among our correspondents, there are none who have shown a greater interest in keeping our directory columns correct than Editor H. E. Hill, American Bee-Keeper. We are glad to add that this publication is one of the best in the line of bee culture and is quoted from and recognized everywhere.—Trade Press List, Boston.

The difficulties between the pear growers and the bee-keepers of Central California, which were so much discussed a year or so ago, seem to not to have been settled by the removal of the apiaries from the pear-growing district. Poisoning of the bees and other troubles are anticipated to break out afresh when the blooming season returns. As a result, Secretary F. E. Brown, of the Central California Bee-Keepers' Association was delegated to make a formal appeal to the National Association for advice and protection in the event of the anticipated recurrence of trouble. The Central California people are members of the National also, a fact upon which they are to be congratulated.

Mrs. Sarah A. Smith, of Grant, Fla., who contributes this month an interesting letter, advises us that her colonies were increased from 80 to 110, and about a ton of honey was secured. Mrs. Smith believes in thoroughly studying the apiarian journals, and has promised Bee-Keeper readers an article dealing with this subject.

Mr. John M. Rankin has resigned his position as inspector of apiaries for the State of Michigan, and Mr. W. Z. Hutchinson takes up the work. We are pleased to announce, however, that Mr. Rankin's retirement from the inspectorship will not prevent him from favoring our columns with an occasional article during the coming year.

According to the Bee-Keepers' Review, the Dr. Gandy, of Nebraska, who was reported to have made a fortune by the production of catnip honey, owns numerous farms which are worked by his tenants for one-half of the product; the shrewd doctor simply absorbing the other half as rental. Honey money is one thing, and oppression money is another thing.

"Hitter," in Australasian Bee-Keeper, says: "The best method for preventing bees swarming is to manipulate them so as to get as large a yield of honey as possible per hive." If asked as to the best method for securing the largest possible yield of honey per hive, "Hitter" would probably advise us to manipulate them so as to prevent swarming. That's simple enough, surely.

Everyone knows what it is to have a dozen angry bees pestering him while the rest of the colony remain quiet and peaceable under manipulation. Is this wrath inherent in the dozen, and will they keep it up the next day and next month? Shiber, in the American Bee-Keeper, says that they are the incurable few. "Don't leave the apiary and leave this guard to keep this thing up as long as they live, for they will. Pick up a fence separator and 'knock the stuffing' out of them, then you will have a yard of peaceable bees. A 'fence' makes a dandy weapon to kill bees." Bees, if once thoroughly maddened, say by an accident, will certainly keep it up, and bees that have only venom in the "stuffing" ought to be out of harm's way. But there are better instruments than a "dandy fence."—Irish Bee Journal.

Alley's system of queen rearing is strongly championed in the American Bee-Keeper by Arthur C. Miller as the best, and he says that Mr. Alley is testing some changes not yet made public. L. Stachelhausen also uses the Alley plan and has less trouble than the cell-cup plan. There is no doubt that good queens can be reared by either method. The small frames used in nuclei do not necessarily form a part of either plan, but not all will agree with the first part of his statement when he says: "As fine queens as any one should desire can be reared with a cupful of bees, and as poor queens as ever lived may be produced by a bushel of bees." Unless he means that the cells are to be first reared in a strong colony.—American Bee Journal.

The Canadian experts are dead nuts on split tops. J. B. Hall, one of the largest comb honey producers in the world, is happy in having never used them, says they are good enough for an amateur, but require too much scraping for a professional, for "wherever there is beeswax the bees add more to it and you have it to scrape off," and the convention cried out "agreed." I suppose we use 1,000 split tops to one not split in Ireland, aye, and three split sections also. Do we have to scrape more now than in the old days of the melted-wax fixing? I think not. Friend Hall is in for saving time. He ought to come over here and see our "amateurs" fixing foundation in three sections at one squeeze. Give me the three split for time saving. We have never had bees add wax to the foundation outside of the sections, whether one split or three split: they don't get the chance with one-fourth inch carriers. Editor Hill does not consider the split top an improvement, but perhaps like friend Hall, he hasn't tried it.—Irish Bee Journal.

THE
Bee-Keeping World

TRINIDAD.

The following is extracted from a letter to the editor of The Bee-Keeper, dated at Arima, Trinidad, British West Indies, Oct. 29, 1902, and is from a progressive subscriber who keeps bees in that far-off island on the Venezuelan coast:

Trinidad is a very beautiful island; the scenery is indescribable, and must be seen to be appreciated. The luxuriant vegetation commands the admiration and wonder of all tourists from Europe and America. They find no words to describe it. The richness of our soil exceeds that of all other West Indian islands. I regret to say that our people have not the pushing, progressive spirit of Americans, and they fail to take advantage of all new ideas; though the Imperial Government is trying to do something, by the establishment of the Imp. Department of Agriculture. Unfortunately, though, we have not a reading public; and as Coggshall says, only the person who reads is progressive.

Our staple products are sugar and cocoa, and you know the present condition of the sugar business. Cocoa is now what the people think of, and it is extensively produced; but the cultivation is not carried on under the best conditions, as the present planters do it as their grandfathers did. The plan practiced here is to put the seed (all kinds) in the ground, and let it grow. That's all. No tillage.

In its cosmopolitan aspect Port of Spain is the London, while commercially it is the Hong Kong of the West Indies, as all produce from the main or north coast of South America—Venezuela, Columbia and North Brazil passes through Pt. of Spain. Its stores are favorably compared with those of Europe and America. The people are cosmopolitan in the fullest sense of the word. From New Zealand to Alaska, Japan, Hawaii and from every part of the world, you will find people here; and all conduct themselves properly under the British flag and institutions. We are governed as a Crown Colony, and of course there are complaints, but few would care to see a change.

For the production of honey Trinidad is an ideal location, but as to the disposal of the product, we have the same difficulty as in Jamaica, Australia, America, etc. I have been developing a home market, but cannot dispose of all my product, as honey has never been used here except in pharmacies.

Hurrah for The American Bee-Keeper. Faithfully yours,

C. M. Carmona.

ENGLAND.

The following notes are gleaned from the Bee-Keepers' Record:

"J. P." puts up his extracted honey in one-pound jars and readily sells it at 25 cents for light and 20 cents for the dark. He relates also the following strange experiences: "I had three frame-hives which swarmed last year, not one of which has done anything this year. This raises the question, 'What about the young queen theory?' Another strange thing: My strongest stock this season was a swarm of 1889, and the stock is consequently thirteen years old. This hive has never had a frame lifted from the brood chamber, nor has the hive been once moved from its floor-board. How is that for the let-alone plan?"

An interesting state of affairs was brought to light the other day. It has been known for some time that a swarm of bees had made the clock turret of the national schools their home, but owing probably to the difficulty of access, no efforts were made to dislodge the intruders until recently when the clock stopped. This, of course, could not be tolerated, and the examination of the turret which followed revealed the fact that the bees had accumulated therein between 40 and 50 pounds of honey. Some of the honey had evidently been made as long ago as last season, but by far the greater part of it was in excellent condition, at least 20 pounds of it being saleable. The natural resentment of the bees at being interfered with made the work of extracting the honey decidedly lively, and several of those who participated in the work carried off souvenirs in the shape of stings. The clock, it may be added, is still stopped, and as bees remain in the turret the visit of the clock-maker may prove interesting.—Sussex Daily News.

ISLE OF WIGHT.

Here in this "Garden Isle," as elsewhere, the 1902 honey crop has been a comparative failure, except in a few favored spots, among which latter, happily, my own apiary is included. It is situated in a sheltered nook and open to the sun. The busy workers made the most of their opportunities, and my twelve stocks have a surplus of 640 pounds of honey, as well as giving me two swarms. In the other apiaries near here the yield has been very small, the average varying from nothing to fifteen pounds. In many cases the bees refused the supers altogether. I find that the brood chambers are nearly empty, so shall have to feed to get ready for the coming season of 1903, which we all hope will be more prosperous than the one just past.—Sam Yanks, Sept. 16.

HUNGARIA.

Six hundred bee-keepers attended the late convention of the German-Austrian and Hungarian bee-keepers at Temesvar, Hungaria. Dr. Dzierzon, now in his 92nd year, was among them.

There are two reasons why meetings of this kind are more freely attended in Europe than in America. 1. Distances are not as great; 2. bee-keepers are more numerous. However, it is a fact that bee-keepers are not as extensively engaged in bee culture as in America; in other words, there are a great many small bee-keepers in Europe.

W. Gunther said in an address before the convention that it was generally accepted: the production of one pound of wax cost the bees anywhere from ten to twenty pounds of honey. He had experimented along that line lately and had come to the conclusion that under favorable conditions six pounds of honey would be sufficient to produce one pound wax.

M. Hamsch spoke on American "red clover queens," and cautioned his hearers not to spend their dollars on them.

Lichtenthaler's subject was foul brood, and he said that the disease had spread for the past twenty years and that the frame hive was largely to blame for this, as the diseased combs were often distributed among the other hives, the bee-keeper not knowing that the combs were affected; thus the disease was carried from hive to hive. (The writer believes, in America it works different. Where the frame hive is found there is also usually sufficient intelligence to recognize and combat the disease. Of course there are exceptions I suppose.)

FRANCE.

Prof. Dulfour, of Paris, after carefully counting and estimating the number of eggs a queen bee lays during the course of a year, says she lays from 150,000 to 200,000. (Evidently the professor has not made the acquaintance of a Gallup queen.)

SERVIA.

At the close of 1900 there were in the kingdom of Servia 7,747 colonies of bees in frame hives and 164,655 in box, and other hives. A bee-keepers' society has been organized in Belgrad and has 264 members. It is under the special protection of the queen, according to the Deutsche Bztg.

SWITZERLAND.

To subdue the grass around hives the Schweizer Bztg. advises to use a copper sulphate solution. one kilo to 50 liter water. (I have tested it. I would rather use it than salt for the latter attracts stock; the former does not. However, sheep and hares do the business in an enclosed yard and nothing better need be invented.)

The Schweizer Bztg. also says, that queens may be marked with any powdered color, moistened with fishglue. Such will last years.

GERMANY.

Editor Steenhusen says in Schleswig Holstein Bztg. that extra strong colonies will winter better and use less honey than those of medium strength. He favors uniting in the fall and feeding up, though, he says, it may be necessary to give an empty brood chamber below, to give bees a chance to cluster under the frames. Upward ventilation he deems beneficial.

Peterson says, in the same paper, that he does not purchase any new untried tools and apiarian implements until they have been found a success with the general bee-keeping public. (That is a safe policy, but if all bee-keepers followed it, progress would be slow. Peterson, for example, uses wire the thickness of a knitting needle for wiring brood frames. He says bee-keepers have reported unfavorably of the light wire, so he don't use it. I wonder how many more years the bee-keepers of the United States will have to use No. 30 wire for the purpose before Peterson will become convinced that it can be used successfully?)

According to Claussen it has just been discovered by the firm, Knud Nissen in Altona that honey may be used to make vinegar. Such vinegar is kept for sale by this firm.

Goeken speaks highly of the Cyprian bee, says, she is the equal in every respect of any known bee. The only objection he has against her is her viciousness.

Gerstung says, that it is as yet an unsettled question whether a balled queen dies of suffocation or from being stung.

Dzierzon favors the "long-idea" hive When such a hive is used, he says, bees never starve.

The bee-keepers of Machren have established a queen rearing station in Ferdinandsruhe for the purpose of breeding the native German bee.

The Seipziger Bztg. contains each month a paragraph giving instruction to box-hive bee-keepers; another for frame-hive bee-keepers. The former are written by Seidel, the latter by Benende. Both gentlemen withhold their permission to copy their writings into other papers. Isn't it a little selfish, friends? Remember, about all you know you have learned from others!

Our German friends have a good deal to say about the American long-tongued, red-clover queens, as intimated before. Mulot in a humorous frame of mind has this to say in a late number of Die Biene: "The reason why the demand for the red clover queens cannot be satisfied lies probably in the fact that the new larvae transferring machine does not work as well as expected. He therefore proposes to feed the colonies from which the larvae are to be taken, a syrup containing pulverized iron, but not more than 150 gram of the latter to one liter of the former (? !!). After such a feeding he thinks the larvae may be picked up readily with a small magnet and transferred uninjured to other cells. (Mulot ought to take out a patent on this.)

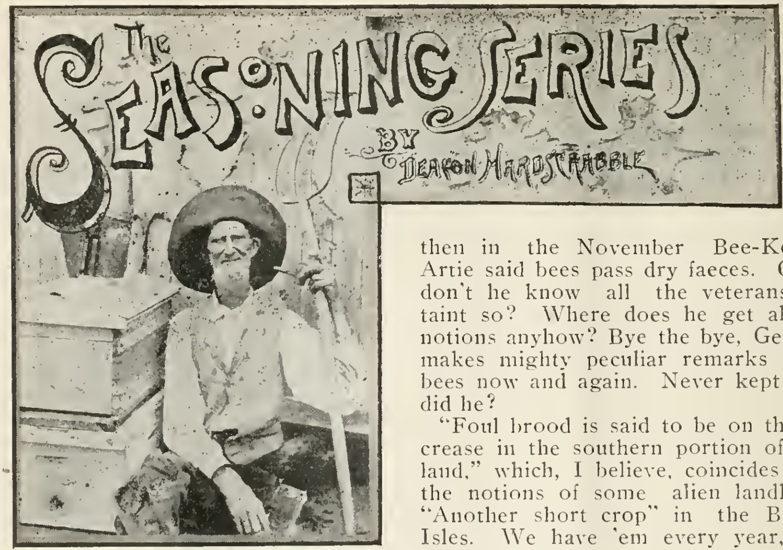
F. Greiner.

DEATH OF DR. MASON.

Dr. A. B. Mason, secretary of the National Bee-Keepers' Association, died at his home in Toledo, O., Nov. 12, 1902. The sad intelligence comes to us at a late hour, through President Hutchinson, who states that the doctor's unexpected death resulted from very severe burns inflicted by an explosion of gas at his home on Oct. 30th. He would have completed the 69th year of his age on the 18th of November.

In the death of Dr. Mason, the American Bee-Keeper not only very keenly feels the loss of a true friend, but is forcibly impressed with the great loss sustained by the bee-keeping fraternity of America, whose condolence goes forth to the bereaved family.

While the history of modern apiculture endures, the name of Dr. A. B. Mason will ever be revered.



The Seasoning Series

By Deacon Hardscrabble

Dear Bro. Hill:

So 'tis to Hell Valley, is it, that Dr. Pons is going? Who told him to? He needn't be so all fired complaisant. I reckon he will find it warm enough without his bees. I'd pick out some other spot than El Valle del Inferno for an apiary, 'specially if my bees were Syrians .

A powerful bad "spell" your compositors have had. Been up against some 'lection "spell binders" aint they?

President-Grandpa Hutchinson says he believes "we are upon the eve of the next great stage in apiculture." Well, here's hoping that he and the rest of we uns don't get stage struck.

Strange sort of "locality" in Medina, O., where "second crop" red clover yields honey and "second crop" white clover doesn't.

Quoth Bro. Aiken: "Putting up extracted honey for the retail trade is a burning question." Humph! If that's his way I don't trade with him I don't like burnt honey. He also talks of the efforts to make both ends meet on $200 to $600 per year. Tell the boys to try Rambler's way—one end meat and t'other vegetables.

If that little Rhode Island Miller don't look out he'll be asked to "splain" some of his revolutionary statements. Georgie York calls him down for some things he said about queen rearing, and then in the November Bee-Keeper Artie said bees pass dry faeces. Gosh, don't he know all the veterans say taint so? Where does he get all his notions anyhow? Bye the bye, Georgie makes mighty peculiar remarks 'bout bees now and again. Never kept any, did he?

"Foul brood is said to be on the increase in the southern portion of Ireland," which, I believe, coincides with the notions of some alien landlords. "Another short crop" in the British Isles. We have 'em every year, and consider "shorts good hog feed; also "shorts are the mainstay of the "bears"—the Wall street variety. Nothin' 'tall to do with bees.

Editor Hutchinson wants some one to formulate and submit a working plan for co-operative marketing. Modest in his demands, isn't he? Just tell him that the producers of successful schemes of that sort get a goodly per cent of the capitalization, and the latter must be big or they don't do the work, see!

This 'ere way o' askin' the simple-minded gullible boys to "give" what costs red corpuscles just because "we be bretheren" is—ah—wearisome. You'll find the gentle beggars are "heeled" either in cash or associates so as to wax fat on the fruit of the gullible brothers' blood.

"Would you, when thieves are known
  abroad,
Bring forth your treasures in the road?
Would not the fool abet the stealth,
Who rashly thus exposed his wealth?"

Yours as ever,
John Hardscrabble.

The Fred W. Muth Co., who quotes the Cincinnati market in our columns, advise us that their quotations are the selling price, and not the prices which they pay. Bee-keepers should bear this in mind.

THE AMERICAN BEE-KEEPER

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H. E. HILL, - EDITOR.

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H. E. Hill,
Fort Pierce, Fla.

Subscribers receiving their paper in blue wrapper will know that their subscription expires with this number. We hope that you will not delay favoring us with a renewal.

A red wrapper on your paper indicates that you owe for your subscription. Please give the matter your early attention.

Editorial

An index to the twelfth volume is herewith presented. A perusal of the list of subjects treated during the past year will be found of interest.

Owing to the space occupied in this issue by the index and other material which was crowded out last month, the Spanish department does not appear.

The publishers and editor join in wishing each and every reader a very Merry Christmas, a Happy New Year and many happy returns of the festal season.

Next month we hope to show a group of portraits of the gentlemen comprising The Bee-Keeper's staff of writers for 1903. No bee-paper in the United States will be more ably supported in this line.

Messrs. Benjamin Parks, Stuart, Fla.; C. S. Harris, Holly Hill, Fla., and J. B. Case, Port Orange, Fla., are three progressive and prosperous apiarists of the "Land of Flowers" who have recently honored the editorial sanctum of the Bee-Keeper with their presence. We enjoy these calls from our readers, immensely.

It appears that a very determined effort is being made by a few Dublin business houses to dominate the affairs of the Irish Bee-Keepers' Association, while the majority of the membership object as strongly in allowing the organization to become subservient to trade interests. Selfishness has no business within the paling of fraternalism.

Le Rucher Belge, for November, which comes to hand as we are making up the forms for this edition of The Bee-Keeper, discusses at length a recent discovery of Professor Lambotte, of the University of Liege, wherein it is claimed that the foul brood microbe, Bacillus alvei, and the common Bacillus mesentericus, are identical. Editor Wathelet is very enthusiastic over the discovery; and, indeed, if the professor's findings are as reported, some very important developments may be looked for in the near future.

Shaking bees from the combs of a colony liable to cast a swarm and thus produce an artificial swarm instead is a plan that has largely engrossed the attention of some of the bee journals of late. The main point at issue now seems to be whether such divisions shall be designated as "shook swarms," "shaken swarms," "brushed swarms" or "forced swarms." It's an important matter in which The Bee-Keeper has not meddled, but with a view to its earlier settlement, we beg to suggest that they be called "shakened" swarms, and the space devoted to the discussion of other equally important questions now waiting their turn.

Deacon Hardscrabble recently "sot" for a new picture especially for these columns, and our readers will have the benefit next month. It's a "good thing," and no mistake. The portrait was executed by the editor, who regards it as one of the "nicest" things he ever did. While at the Bee-Keeper office the deacon expressed deep regret that the reforms which he had hinted at in the past had not followed his admonitions to a satisfactory extent, and that if they were not soon forthcoming he would discontinue his hints and get down to plainer expressions of facts in general. With a tear in his eye the good old deacon assured us that he had "done got tired of beatin' around the bush."

"Old Grimes" and "David Grimes" have interested and instructed readers of the American Bee Journal and Gleanings in times past, by their original ideas and entertaining style. The American Bee-Keeper presents in this number the initial contribution of "Old Grimes, Junior," who is a new contributor, wherein he evidently seeks to impress his readers with the wickedness of offering a premium to some one for committing a crime. May be Old Grimes, Jr., has a better plan in mind for forestalling the lies in circulation in regard to artificial comb honey being sold. He appears to have not reached this point yet. It must be admitted that the $1,000 reward to which he refers has not been effectual in heading off the base canard.

With reference to the present race for the position of general manager of the National Association, the American Bee Journal says: "To be just and fair, any bee paper that mentions one candidate must mention all candidates. An editor's personal views have no bearing in a matter of this kind." Just why "an editor's personal views" should not have as much bearing in a matter of this kind, as the personal views of any other member, is not readily apparent. And is it not the duty of each member to use his influence in every possible way to advance the interests of the association? In the possible event of very many members of the association becoming as prolific nominators as some have been this year, the Journal's idea of editorial propriety would give the papers rather more of a list of candidates than they could handle conveniently.

This number completes The Bee-Keeper's twelfth and most successful year of publication. That it has added to its subscription list a larger per cent of new subscribers than any other bee journal in America during 1902 is an unquestionable fact, which the many friends, who have kindly assisted in introducing it into new homes and apiaries, will be pleased to learn. Our sincere gratitude goes forth to these friends, as we formulate our arrangements for 1903, and pledge our earnest efforts to give them a bee-paper which will constantly grow better. We shall diligently seek that which we deem of interest, and helpful; faithfully labor to advance the cause of improved methods in apiculture and increase the remuneration of its pursuers, defending their rights and interests without fear or favor; and we solicit the kind co-operation of every reader in our efforts to faithfully serve the fraternity.

FLORIDA'S RAMBLER.

Mr. O. O. Poppleton, the big bee-keeper in regard to whose operations we wrote at length in the November number of The Bee-Keeper, has returned from a northern trip, and is now cruising with a party of friends among the Florida Keys, with his launch. In a letter to the editor, dated at Miami, Nov. 15, just before heading his craft for the open sea, and in reference to his recent visit to Washington, he writes:

"I attended, at Mr. Benton's house a very interesting bee convention, consisting of Mr. Benton, Capt. Hetherington and myself. It lasted way into the 'wee sma' hours' of the morning. That was the kind of a convention in which I was much more interested in using my ears than my tongue. I think you would have enjoyed being a quarter of that convention." Wouldn't we though!

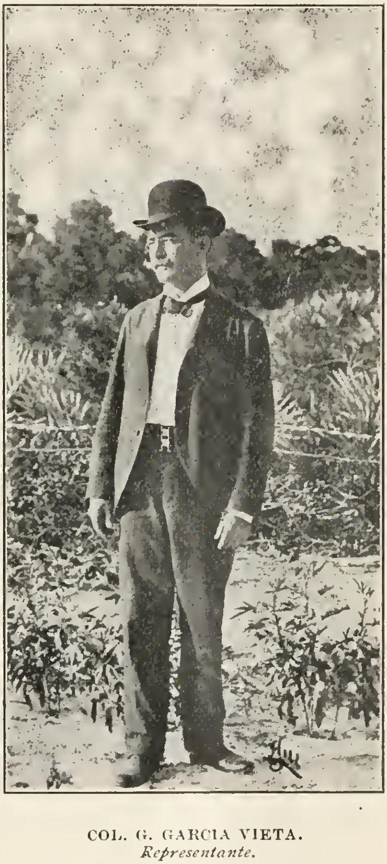
Capt. Poppleton expects to be among the Keys, and consequently "dead to the world" for about six weeks.

A VISIT FROM COL. VIETA.

We have recently had a most enjoyable, though brief visit from Col. Ganzalo Garcia Vieta, one of Cuba's most extensive producers of honey. Without previous knowledge of the business, the colonel purchased the apiary established on the south coast of Cuba by the editor of The Bee-Keeper, some sixteen years ago. During the late war the Spanish burned all his bees, which numbered about 2,000 colonies, and also his very complete apiarian equipment. Since then, however, Col. Vieta has gone up again like a rocket, and now has about 1,800 colonies, in five or six apiaries, scattered through the mountains. Since his return to Cuba, we are advised that even before the bellflower had begun to bloom, about 15 tons of honey had been extracted. The prospect for 150 tons of honey this winter is very favorable; and the colonel's enterprise is deserving of all the success which may come to him.

With their apiaries conveniently located about and near their homes, it is improbable that many American bee-keepers appreciate the difficulties under which bee-keepers of the Cuban mountains have to labor. Colonies of bees, supplies, the honey produced, and all incidentals have to be "packed" upon the backs of horses, mules or oxen, along the mountain trails, a great distance, to and from the apiaries. Think of having to "pack" 200 tons of honey in this way to the seashore, thence thirty or forty miles by boat to a shipping point. Do Americans recognize no competition in people who display such remarkable pluck and enterprise? Everything about Colonel Vieta's apiaries was of the most improved order; steam power for extracting, and an automatic system of conveying the combs from the apiaries to the extracting house, or room. The new equipment will doubtless be even more complete and much more extensive. One case, of two cans on each side—240 pounds— constitute a load for a horse or mule in transporting honey from the mountains. In moving colonies of bees, five are taken at once—two on each side and one secured on top. Few Americans, we think, would care to undertake such difficulties in order to succeed in bee-keeping; yet it is this sort of pluck and determination which wins out in this as in any other business.

Owing to the fact that Col. Vieta is a member of congress in the young republic, and at present necessarily in Havana a great part of the time, he is unable to give the bees the personal attention which he formerly did; though he makes it a point to visit each apiary once a month, at least, and give personal directions as to their management.



COL. G. GARCIA VIETA.
Representante.

The subject of this brief sketch has for many years been one of the editor's warmest friends, and a staunch supporter of The American Bee-Keeper, and we have pleasure in presenting herewith a snap shot of our Cuban visitor, which was taken while he gazed with evident compassion upon the poverty-stricken sands of Ft. Pierce, and mused with sympathetic feelings upon the plight of its inhabitants.

GROUNDLESS SUSPICIONS.

It is often amusing to observe the feeling of antagonism toward the supply manufacturer possessed by some bee-keepers. A casual reader of some of the pen productions actuated by this spirit, would be led to suppose the manufacturer of the necessary apiarian appliances, was one of the obstacles to be dealt with. In fact, the idea, in some cases, seems to be that the supply man is an unscrupulous trickster whose chief aim in life is to impose worthless traps upon the unsuspecting bee-keeper. Nothing could be farther from the truth. Certain bee-keepers may differ in opinion with the manufacturer of any article, as to its merits; yet the fact is self evident that the success of the manufacturer depends almost entirely upon his ability and willingness to provide his patron with such goods as he actually needs and give him satisfaction. There can be no question as to the honest efforts of most American supply manufacturers to meet the demands of the business, as manifested by the bee-keeper. It is, further, evident that, in consideration of the diversity of ideas among bee-keepers as to what is the proper thing for this and for that, that the manufacturers are meeting with remarkable success in pleasing their customers. Ours would be a sorry plight indeed if we were to be suddenly deprived of the factories which now turn out the appliances used in the apiary.

With some, too, the notion prevails that if a manufacturer publishes a journal, it is for the sole purpose of booming his own line of supplies. Has any one ever seen Falconer's supplies crowded to the front through the columns of the American Bee-Keeper? The publishers of this journal are one of the largest manufacturers of bee-keepers' supplies in the world. The American Bee-Keeper is their own exclusive property, and they are therefore at liberty to direct its course as they desire. It might be made a "house organ," the object of which would be to laud the merits of their products, and sandwich everything in its columns with references to goods which they offer for sale. They have, instead, engaged the services of a bee-keeper, over a thousand miles away to take entire editorial charge of their publication, without even once in five years hinting at the idea that their goods should be mentioned. It may be of interest to some of our readers to learn that The W. T. Falconer Mfg. Co. know no more of what is to appear in their journal from month to month than do their competitors in the supply trade. Their sole object in publishing a bee journal is, evidently, to assist bee-keepers in achieving success; knowing that when bee-keepers are prosperous, bee-keeping appliances will be in demand, and that correct and courteous business methods and excellent goods will bring them regularly their portion of the trade.

The first number of The American Bee-Keeper was published in January, 1891—twelve years ago. On page 11 of the first number, that deep-thinking, and highly esteemed veteran bee-keeper of Marengo, Ill., Dr. C. C. Miller, had this to say:

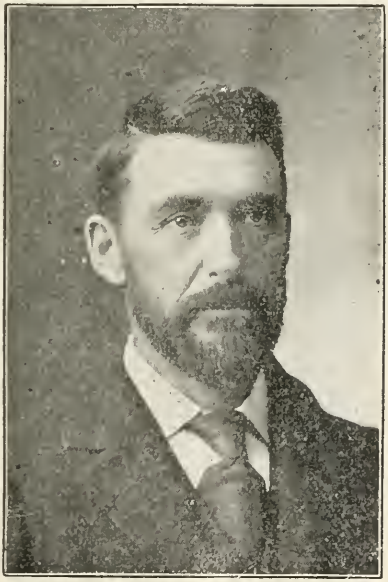
"I am glad to have one of the old journals pass into the control of so well established and reputable a concern as the W. T. Falconer Mfg. Co. I would rather see every bee journal free from all connections with the supply business, if we could have just as good journals in every other respect, and in addition have the editorials entirely impartial. But an observation extending through the life-time of bee journalism in America shows me that, as a rule, a paper without connection with the supply business has not a very long lease of life. So a good strong backing gives us promise of greater stability and of greater usefulness."

For five years The Bee-Keeper has had no more connection with any supply house than if it had been the personal property of the editor. It has, however, the advantage of the same "strong backing," financially, as if edited by the publishing firm. The editor of the American Bee-Keeper, in the pursuit of his duties, thinks first, last and all the time of the welfare of bee-keepers. The W. T. Falconer Company's business is not lagging, nor will it do so, so long as bee-keepers are doing a prosperous business.

As we start upon our thirteenth year, we earnestly invite every one of our thousands of readers to help us in our efforts to give them an impartial and helpful journal.

MR. N. E. FRANCE.

We present herewith a portrait of N. E. France, the candidate for general manager of the National Bee-Keepers' Association, who was nominated by Secretary Mason last month, and who is indorsed by several of the leading journals. Editor Root expresses himself in unmistakable terms as favoring Mr. France's election. Editor Hutchinson says he will vote for Mr. France and hopes all his readers will do likewise. Editor York attributes injustice and unfairness to any editor who does not squarely present all nominees. It is not quite clear as to whether this was intended for a shot at Editor E. T. Abbott, of the Modern Farmer and Busy Bee, who is Mr. France's opponent in the field, and who not only confines his mention of candidates to himself, but puts forth a very strong plea for election; but it has that appearance. These are all men active in the work, and holding office in the National Association, and their judgment as to what is best for the Association's interests ought to carry weight.



Cards will soon be sent out to all members, giving them an opportunity to vote for their choice of men to fill this important office. Every member will wish to see the best man win. Let us hope it may be so.

Director Dadant, of the National, has tendered his resignation.

"Pat" has pitched his tent at Cabanas, Cuba.

According to the U. S. census report, Texas produced 220 carloads of honey in 1899.

Dr. Miller thinks "shaken swarms" should be ued to disignate colonies produced by shaking. Editor Root strongly contends for the introduction of "forced swarms." The doctor's choice is decidedly more appropriate and to the point.

There will be three vacancies on the boar dof directors of the National, to be filled by vote of the members this month. The following gentlemen have been nominated for the positions: Wm. McEvoy, Ontario: G. W. Vangundy, Utah: Wm. A. Selser, Pa.; Udo Toepperwin, Tex. Messrs. N. E. France and E. T. Abbott are the nominees for the position of general manager.

Aged persons who are thoothless, says Dr. Fernie, in his work entitled "Herbal Simples," can live almost exclusively on honey. The great Duke of Beaufort, whose teeth were white and sound at seventy-five years of age, while his general health was likewise excellent, had for forty years before his death used a pound of sugar daily in his wine, chocolate and sweetmeats. Tacitus informs us that the Germans gave credit for their great strength and their long lives to the mead or honey beer on which they regaled themselves. Pliny tell of Rumilus Pollio, who enjoyed marvelous health and vitality when over a hundred years of age. On being presented to the Emperor Augustus, who inquired what was the secret of his wondrous longevity, Pollio replied: "The eating of honey and anointing with oil." Honey has certain claims as a food which sugar does not possess. It is a heat former and a producer of vital energy, both in the human subject and in the industrious little insect which collects the luscious fodder.—Irish Bee Journal.

Better be driven out from among men than to be disliked by children.—Dana.

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In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy white," "No. 1, dark," etc.

New York, Nov. 7.—Demand for comb honey is good; extracted, quiet. The supply is more liberal, but yet limited. We quote: Extra fancy comb, 16½ cents; fancy, 15½. New York state extracted, 5½ to 8 cents. Beeswax in fair demand with good supply at 27 cents.—Francis H. Leggett & Co.

Buffalo, Oct. 8.—Buffalo honey market has considerably improved lately and we believe moderate shipments will do well. Strictly fancy 1 pound comb selling at 15 and 16 cents. Commoner grades selling from 14 down to 10. Extracted is not wanted except in small tumblers about $1.25 to $1.50 per dozen for strictly pure.

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Kansas City, Nov. 11.—We quote comb honey, 14 to 16 cents. Goood demand and fair supply. Extracted, 5½ to 6½ cents. No beeswax on market, at 30 cents.—Hamblin & Sappington.

Cincinnati, Oct. 13.—The demand for extracted honey in this market is good, and finds ready sale as follows: Amber, 5½ to 6 cents. White clover, 7 to 8 cents. Beeswax, 28 cents. We are cash buyers.

The Fred W. Muth Co.

Chicago, Nov. 7.—Prices remain steady but the demand is small. We are not selling the quantity that we have done ordinarily at this season of the year. The advance in price has checked the trade in addition to which retailers have got the impression that honey is going to be very scarce and they are not pushing its sale. Fancy white comb brings 15 to 16 cents, with travel-stained from one to

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two cents per pound less; amber honey brings 12 to 13 cents, according to kind and style of package. There is very little call for the dark amber and buckwheat grades. Extracted honey, white, sells at 7 to 8 cents per pound; the dark and amber brings 6 to 7 cents. Beeswax sells upon arrival at 30 cents per pound.—R. A. Burnett & Co.

Cent-a-Word Column.

It frequently occurs that some member of the Bee-Keeper family desires to advertise for sale some article the value of which will hardly justify the payment of our regular rates; and yet it would be an accommodation if he were permitted to tell others what he has to offer. Some other reader may be in need of just such an article as that of which he wishes to dispose. Again, it is as frequently desired to exchange commodities for which we have no especial use, for something more desirable, and such exchanges are often made to mutual advantage. We have, therefore, decided to place at the disposal of our readers a column devoted to the accomplishment of these ends; though we cannot be responsible for any possible dissatisfaction which might arise as a result of such exchanges. The rate will be uniformly one cent for each word, each month; no advertisement however small will be accepted for less than twenty cents, and must be paid in advance. Count the words, and remit with order accordingly.

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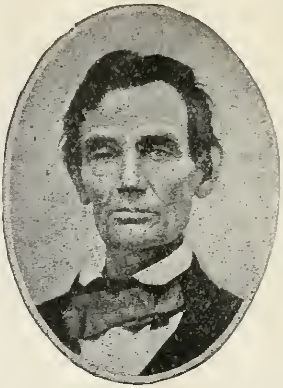

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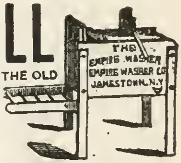

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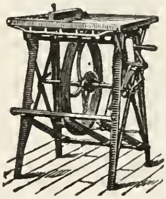

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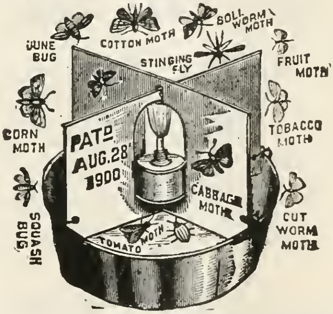

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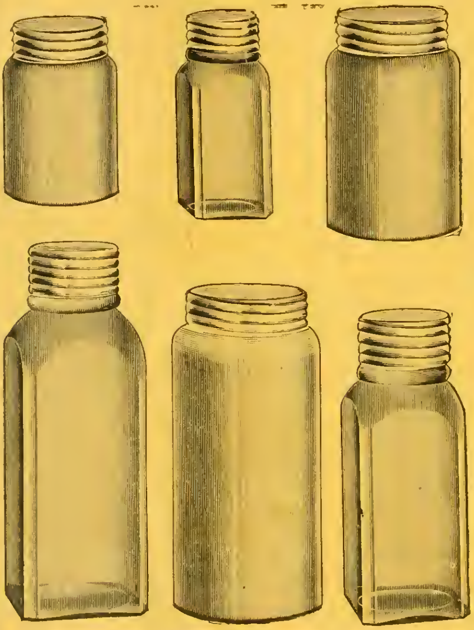

¼ lb.	square Her. jars,	doz., 50c;	$ 5.40	per gr.
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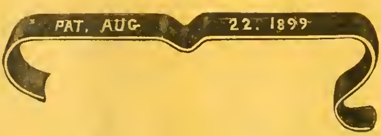

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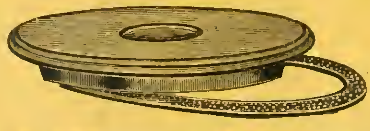
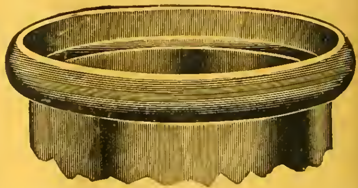
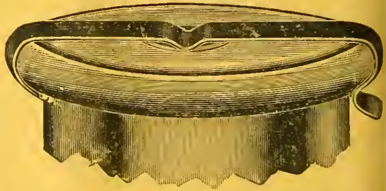


clearly how the jar is sealed. The rubber ring
between the rim of the glass top and the
shoulder in the opening of the jar's mouth
with the pressure exerted by the spring or
the center of the top, makes a perfect sea
with continuous pressure, because of th



spring of the metal clasp. With this kind
a fastening the jar is very quickly sealed-
more quickly and securely than with a rin
The cover fits down in so neatly that, i
order to remove, you may have to insert th
end of the spring under the edge to pry it ou



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two styles which seem best adapted for ho
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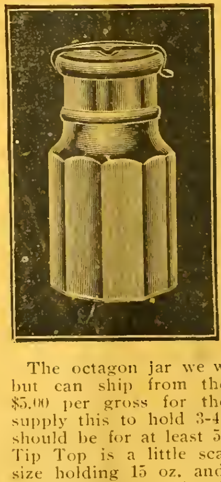

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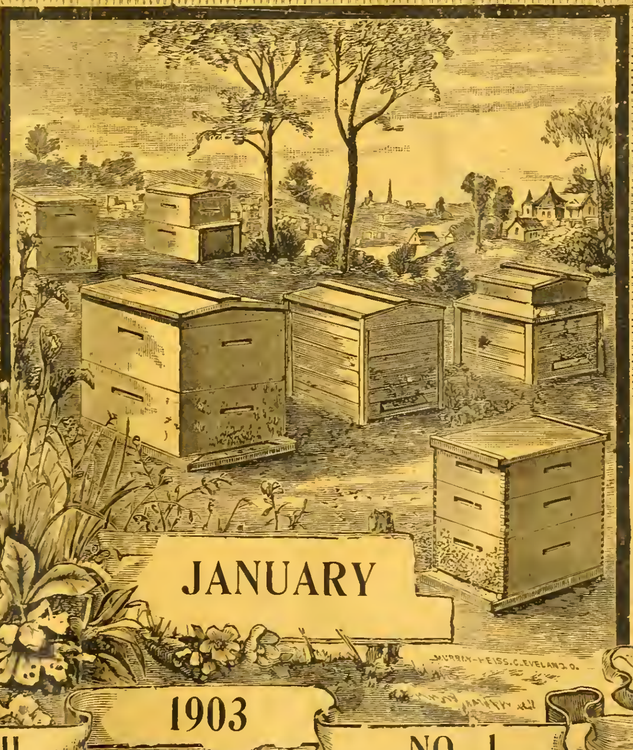
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JANUARY

1903

VOL. XIII

NO. 1

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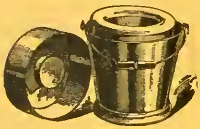

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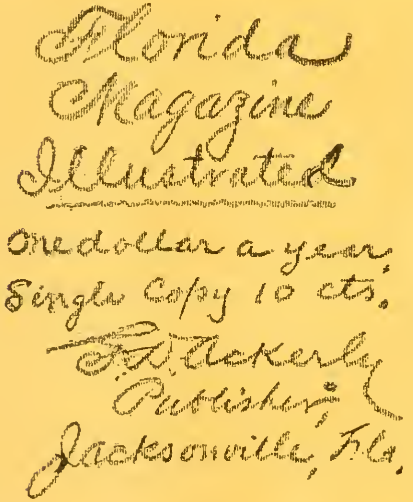

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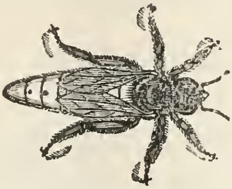

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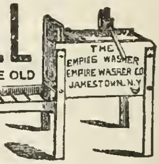

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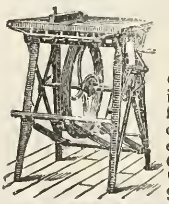

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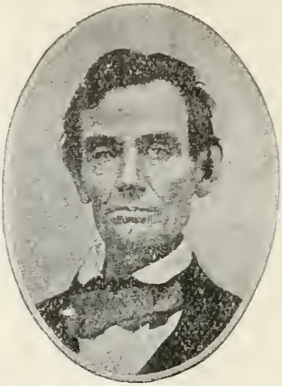

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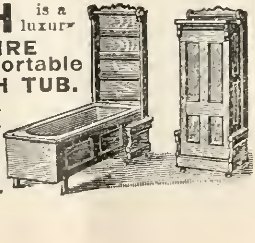

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THE AMERICAN BEE-KEEPER

Published Monthly by The W. T. Falconer Mfg. Co.

Vol. XIII JANUARY, 1903 No. 1

"SOUTHERN HONEY."

A Southern Producer Raises His Voice Against the Use of the Pernicious Word in Quotations.

(By C. S. Harris.)

BROTHER bee-keepers of the South, let us freely and openly support the editor of this journal in his effort to break dealers of the bad habit of lumping our product under the head of "Southern" honey.

Since the beginning of my bee-keeping days, some dozen years ago, this unjust and unfair method of quoting the honey of the South has irritated me whenever and wherever I have run across it.

It may be that in former years the honey from this section of our country was marketed in such shape as to merit this style of quotation, but at the present time that certainly is not the case, for there are many up-to-date bee-keepers located throughout the South, and there are some classes of honey found here that compare favorably with any produced north of the Mason and Dixon line.

I have no personal knowledge, it is true, of the better grades of honey of the South beyond this immediate section, but it is not likely that Florida has a monopoly in this respect, and for light and amber honey of good body and fine flavor that from mangrove and saw and cabbage palmetto is hard to beat.

I was born and bred a Buckeye, and am acquainted with the brag honey of the north-middle states, and yet I would hesitate to place either clover or basswood ahead of saw palmetto honey, usually the main crop in this locality and second in color, if nothing more, to mangrove honey, produced further south. I have sold palmetto honey in Cincinnati for a number of years at a figure above the market quotations of basswood and clover. The past two seasons have been failures here, however.

Editor Hill sounds a true note when he says that "'Southern' honey is no more specific in designating quality than would be Northern, Western or Eastern honey." It is high time that dealers were made to understand that our honey should also be quoted by name or grade.

I would like to hear an expression on this subject from other parts of the South, for it can do no harm, and perhaps much good, to let the dealers know that we are in sympathy with the stand taken by Mr. Hill in our behalf.

Holly Hill, Fla., Dec. 1, 1902.

BACILLI.

Something About Dr. Lambotte's "Discovery."

(By Adrian Getaz.)

IN the December issue of the American Bee-Keeper there is an editorial stating that Prof. Lambotte has published in the Rucher Belge, a series of experiments tending to prove that the Bacillus alvei. which produces foul brood in bees, is the same as that called bacillus mesentericus, which is found sometimes in decomposed bread or cheese.

Before going further, it must be remembered that the bacillus mesentericus is not always, and in fact not often met in decomposed and putrefying substances. Wet bread and old cream, are the substances on which it is usually seen. The numerous germs which are always present in the air, and so rapidly decompose dead substances belong nearly all to another order of beings.

Briefly, the arguments presented by Dr. Lambotte are these:

1. The bacillus mesentericus and bacillus alvei have the same shape, the same size and present the same arrangement when cultivated.

2. Both bacilli produce (out of the matter in which they live) a ropy, glue-like substance.

3. Both have the same effect on the serum of the blood, when injected in the veins of an animal. This last consideration is presented by Prof. Lambotte as conclusive.

4. A "culture" of Bacillus mesentericus was spread over some brood to give them the disease. The larvae were killed, but after three days the bees had cleaned them out and no further damage was observed. This experiment was repeated a number of times with invariably the same result.

5. Prof. Lambotte then tried another plan. He took a number of larvae, ground them and made a "culture" with it. In this culture, he introduced some bacilli mesentericus—repeated the operation on the same set several times, so as to get them used to that kind of food. These are not the terms that he used, but it is the meaning. Then he applied the culture to a comb of brood. The result was that about one-fifth of the larvae were diseased and the remainder had been cleaned out by the bees, when examined.

Well, as Dr. Miller says, sometimes: "I don't know," but judging by Dr. Lambotte's own report, I should rather think, he is wrong.

As to the first item, I may say that the two bacilli, though apparently identical, may yet be different. Bacilli are very small things, and only their general size and shape can be ascertained under the microscope. It is very much like looking at two men at a distance of a quarter of a mile with our natural eyes. Their general size and shape can be seen but all the details of the face, hands, etc., escape our sight entirely.

As to the second point, while the products obtained are in both cases ropy, glue-like and of about the same consistency and color, they may yet not be identical. And if they were it would not be impossible that two different bacilli could produce the same substance.

The fourth item seems to me a clincher against the professor. A culture of bacillus alvei from a diseased colony applied to sound brood as the professor did, would have, in each and evrey instance, developed a raging case of foul brood, while the application of a culture of Bacillus mesentericus failed to produce any disease. However, I do not want to be too dogmatic. The professor says that some of his attempts at introducing the Bacillus alvei also failed.

The fifth item is not very conclusive. One-fifth of the larvae got sick and very sick at that, and their sickness was almost if not altogether like foul brood. Still it might not have been foul brood. We might prepare a concoction of putrid meat, "embalmed beef," or such things like that, which when eaten might produce a sickness very much like cholera morbus, and yet it would not be a case of cholera morbus.

If that fifth of the larvae which got sick were really a case of foul brood, the whole colony would become diseased entirely in the course of a few months. Unfortunately nothing is said on that point.

In view of his failure to develop foul brood by inoculating cultures of Bacillus mesentericus, it may seem strange that Prof. Lambotte still insists that it is the same bacillus which produces foul brood. He claims, however, that the spores are probably always present and only develop when the conditions are favorable, that is, lack of proper food, too much dampness, etc.

Those who know how rapidly foul brood spreads throughout a whole apiary even when the colonies are in the very best condition, are not likely to accept such an explanation.

Knoxville, Tenn., Dec. 9, 1902.

Honey is frequently recommended as a substitute for butter, to spread on bread; but no one appears to have observed the fact that butter and honey constitute a combination that's not at all disagreeable to take.

SHAKEN SWARMS.

Something of the Origin, History and Practice of the New Fad.

(By Arthur C. Miller.)

FOREMOST in apicultural discussions of to-day is the subject of forced swarms. From the attention it receives one might almost believe it was something new. Gravenhorst, the great German bee master was, I believe, the originator of the plan which he made public some time in the '70's. Mr. Stachelhausen, of Texas, brought it to the attention of Americans in the early '80's by a series of articles in the American Agriculturist, but it met with a cold reception by the then veterans; men who are now either grudgingly giving it it's due, or trying to make good their former mistakes by fulsome praise. However, a goodly number of enthusiasts gave the method a thorough trial and most of them have used it ever since.

Like many another thing related to bees, the ever ubiquitous "locality" was found to make necessary varying modifications and those bee-keepers who have used the method from the start have gradually changed little details to make it more conformable to their conditions. Here in southern New England, I have found that the following conditions give the best results: First, a strong colony with an abundance of young bees; second, a shallow hive with two or more of the frames containing comb, the rest starters; third, that the shaking off be done at the opening of the honey flow.

In elucidation of these conditions, I would emphasize that a "strong colony" to me means one that when shaken into the new hive, the bees will completely fill the "half depth" brood nest, and quarter to half fill the super. Then if the honey flow comes on well, another super will be needed in a very few days. But it should be understood that there seldom occurs a "honey shower" here; the flows open slowly, rise steadily to a maximum, and as slowly decline. That of course being the normal way, but drouths, storms, etc., affect it as elsewhere. Owing to the uncertainty of the weather along the New England seacoast I find it is much the safest plan to give the "swarm" a combful of honey, otherwise a cold storm may reduce a powerful and would-be profitable swarm to a mere handful of enfeebled bees.

Mr. Crane, of Middleboro, Vt., recently stated that he practices the same plan of giving honey to the swarm and finds it profitable so to do. Any old honey will answer the purpose, unless too many combs of it are given, for the bees will consume it all. I even prefer a comb that has much pollen as well as honey.

The combining of the bees from two or more colonies to make a strong "forced swarm" I have already discussed in the columns of this paper. It is a subject which will well repay the bee-keeper to study carefully; I mean, to experiment with, and to observe the difference in results between "swarms" where the percentage of young bees exceeds the old, and vice versa. A combination which works well under some conditions may be a total failure under others, and I doubt if any absolute rules regarding it can be formulated, the nearest I know being, that for a short heavy flow, particularly if for extracting, use all the "old" or field bees possible, and for a slower flow and for comb honey have a large percentage of young bees.

The starters I use consist of two to four rows of cells left when cutting combs from frames. I like such starters far better than those of foundation, and as by the shake off plan combs are always increasing, cutting out surplus combs and turning them into wax kills several birds with one stone; it yields cash, saves cost of foundation and leaves starters in frames ready fastened, and which no weight of bees can pull down.

The size of the brood chamber to use is a subject in itself, and together with style of hive and surplus case, must be left for another article.

Providence, R. I., Dec. 9, 1902.

It would be hard to find a bee-keeper these days who is not "surprised" to note that the "shaken swarm" idea has been regarded as a new thing. It seems that all bee-keepers have been practicing the plan right along, but have simply failed to mention the fact. This time, they have all "got 'em fust."

A MILD AUTUMN.

And Its Remarkable Result in Little Rodey.

(By Samuel Bridgham, 2nd.)

HAS anyone told you about the weather lately? Please don't laugh. I mean it, that is to say the kind of weather we have been enjoying here in Rhode Island. Warm, balmy, enticing. The kind of weather that makes one want to take a long walk in the country to see the wonderful autumn tints of foliage and sunset. You see I am speaking from the point of view of the city fellow just now, and the truth is that a blank brick wall, (no not even one window wherein perchance I might see a pretty face to beguile the hours, breaks the monotony of it), helps to cut off the sunshine.

This sort of rot is rather far from my subject, however, and is not at all what I started to write.

The truth is that the "pussywillows," are budding in my neighborhood rather profusely for this time of year, together with quite a number of blooms of other species. Not at all an unusual thing, say many of the old people hereabouts, but, coupled with the extended warm spell which is rather prolonged even for St. Martin's summer in this latitude, it has caused a state of affairs among the bees in my yard, and the state of affairs is this:

The weather being warm you can can see, I was about to say all the bees, at any rate a goodly number, flying briskly nearly all day. This is particularly noticeable in the morning and afternoon. In the morning the majority of flying bees in the yard seem to be departing from the hives. At noontime what bees are in the air are hovering close by, and at nightfall there is a grand rush to get inside out of the cold, nevertheless there does not seem to be so great a number of bees returning as went out in the morning.

Besides all this I have noticed that hives which were quite well filled at the close of the honey harvest, and which gave promise of wintering well, are now rather too light, while those hives whch were on the ragged edge, so to speak, that is to say those hives on which, at the close of the honey season it was safe to run a risk in regard to their wintering, at the present time need feeding very badly.

That is the state of affairs. Now what does it mean? Good, "hefty" hives suddenly gone light, questionable ones now undoubtedly in need of supplies, and light ones on the verge of starvation. Surely something is wrong. Someone will say, "that chap did not leave enough honey in the hives," but I want to say right here that the only honey removed was from those hives which had the brood chamber filled solidly with stores, while those hives in which the brood chamber and supers were only partly filled were left alone, in order that the bees might remove what honey they had stored in the supers to the brood chamber, which operation they have performed in every instance.

As a rule the weather at this date is so chilly that but few bees are abroad, except now and then for a cleansing flight in the middle of the day, and it seems to me that the warm weather of the past few weeks has stimulated them to too great activity, so that they range the fields in quest of nectar and, their search being vain, are compelled to return to their hives and draw heavily upon their resources in order to maintain their vitality and strength. As a matter of fact I have seen bees far from the apiary, which is the only one that I know of in the neighborhood, vainly alighting upon the frost-withered blossoms of the goldenrod, and eagerly appropriating what scanty food the infrequent pussy willows, anemones and other blossoms afford, while the part of the dwelling house where the honey is kept is continually visited by numbers of bees almost daily.

Are the bees over-stimulated by the warm weather and compelled by the lack of supplies afield to draw too much upon their honey supply? I am inclined to think that this is the explanation of the case, and that it will be necessary, even at this late date, to resort to artificial feeding in order to enable the bees even in the strongest hives, the hives that have the most honey, to winter successfully. In fact, I have already begun to do so. Has anyone else been troubled in this way? If so, what explanation have they to offer?

Providence, R. I., Oct. 18, 1902.

KEEPING BEES ON SHARES.

(By L. E. Kerr.)

IT would not be surprising if some of the brethren have had sufficient experience along this line to do them for a good while; but this is no reason for supposing that bees cannot be profitably kept on shares, or that all who meddle with this kind of fire are bound to get their fingers burned. In fact, I have found that this is sometimes a very good way for the apiarist who is overstocked to manage his surplus colonies, and is also a good and cheap way to get started in bee culture.

One hundred colonies are as many as can be profitably kept in a place here; and I find this to be much better than starting a number of out-apiaries, which entails a large expenditure of money and constant attention.

I have kept bees on shares and have let them out on shares, for a number of years, and I have yet to have the slightest trouble with anyone with whom I have dealings in this respect.

A division of stock is made in early autumn and each party takes his chances of wintering. The old colonies, of course, are not divided, but remain the property of him who lets them out in the spring, for a share of what they may produce in swarms and honey.

In letting bees out on shares, I am free to turn my attention to other matters, and at the end of the season my number of colonies is somewhat increased and I get a nice lot of honey from each of the parties who are keeping bees for me in this way, and all this is clear gain. While one has the whole product of an out-apiary, after the expenses are taken out the profit is more than apt to fall below what it would have been if the bees had been out on shares, for half.

It was necessity which compelled me to adopt this method of managing my surplus colonies at the start; but I am free to put my surplus of some 200 colonies into out-apiaries and attend them myself, and do not care to.

For the man who has nothing else to do but to go around and tend to his out-apiaries, these may sometimes be made quite profitable; but for one who has other matters to claim a good share of his attention, it may be the best to let his surplus colonies out on shares.

Hurricane, Ark., Nov. 20, 1902.

WINTERING.

How a Maine Bee-Keeper Avoids Carrying Bees to and from the Cellar.

(By Rev. C. M. Herring.)

MY last device is a saving of time, labor, and profit. To carry bees into the cellar in autumn, and then lug them out in the spring, is hard work. During hot weather, in the cellar, when there comes a thaw, if the bees are fastened into the hives, they become restless, and are liable to relax into filth and disease, but if they are left open they crawl out, and are wasted on the cellar bottom; so that recently I have found a better way. I winter my bees now, without moving them from their summer stands.

My hives are arranged on two continuous planks, eight inches from the ground, in a long line, on the south side of my buildings, four feet away.

In front of this line, about two feet, I have planted a row of grape vines, which are on posts and wires, and they go up about eight feet. These vines, in the first of the season, are without leaves; but as the heat of summer comes on, they are covered with dense foliage, which affords the bees a delightful and refreshing shade.

These vines also furnish the family, in various ways, with refreshing condiments, and a sweet beverage, besides giving me first premiums at our fairs.

Inside the hives I spread over the frames, lifted one-half inch, four or five warm blankets, and outside, I wrap the hives carefully and snugly, in tarred paper, fastened closely with strips of wood. Then I cover each hive with a strongly made cap, nearly three feet square, which in summer affords shade, and in winter gives protection from storms and wet.

Sometimes I wrap my hive in a warm blanket, old coat, quilt, which under this cap, gives grand success.

Then when I contract the entrances three-fourths I say to old winter: "You may do your best; my bees are safe; let the frosts sting, and let the tempests howl, my bees will conquer the elements, and will show up well in the opening season."

Brunswick, Maine, Nov. 23, 1902.

APICULTURE IN MEXICO.

The following article, from the Mexican Herald of Dec. 7th, by Carl Ludloff, was sent to us by Mr. F. Bussler, of Orizaba, V. C., Mexico. In view of the fact that it is difficult to obtain apicultural information from that section of the country, and but little is heard from Mexican bee-keepers, it will doubtless be of interest to our readers. However, experienced bee-keepers will be more inclined to attribute Mr. Ludloff's losses to the great increase of colonies, rather than the faulty hive construction, of which he speaks, since he notes the fact that he is young in the business:

San Pedro de los Pinos, Tacubaya, D. F.—The high table lands of Mexico offer a splendid opportunity for bee-keeping. Bees find plenty of honey flowers all the year round, especially in those parts of the country where there exists already irrigation. The quality of the honey gathered excels the best brands of the northern and western states of the American union. The main honey plant is a weed (Sycios angulatus), belonging to the cucurbitacoes, known by the Mexican name of "Chayotillo;" it is a creeper and grows almost everywhere. The season of the honey flow lasts exactly so long as this plant flowers, from August to the beginning of November.

There is no such danger of loss connected with wintering the bees as in colder climates; all that is necessary to warrant success in bee-keeping is—besides a fair knowledge of this branch of business—a hive constructed according to the climatic peculiarities of this country with its sunny, hot days and cool, sometimes even frosty, nights during the dry season.

The writer of these lines commenced apiculture in this country during the spring last year, and so far he is more than satisfied with the results he has obtained.

From fourteen (14) nuclei of thoroughbred bees—Italians, Cyprians, Carniolans, Holy-Lands, Blacks—which he had ordered from the north at that time and which had arrived here in a pitiful condition—only the queen and merely a handful of half starved bees were left in each box. He succeeded in getting, during the first season, fifty (50) hives of bees and a crop of 300 to 400 pounds of splendid honey.

From those fifty hives he lost during last winter thirty from spring-dwindling as a consequence of the unfit hives which he had ordered from the United States. He had to discard everyone of them. From the twenty hives left in poor condition he managed to get during this summer eighty-six hives of bees and a very considerable crop of excellent honey. There is no trouble whatever to sell this kind of honey.

Experience has taught me that the secret of success rests almost exclusively in the proper construction of the hive itself. The main condition is to select a material which keeps the interior of the hive warm, or better, independent from the changes of the outer temperature allowing the bees to create themselves that degree of temperature which they need for their subsistence and raising brood.

After many experiences and trials—costing considerable time, patience, work and money—he succeeded in constructing a hive which fits exactly the purpose in view.

He improved the Mexican hive according to modern ideas, put in movable frames, made it about five times larger and this is exactly what the country needs. This is the improved Mexican tunnel hive.

These hives may be made by anyone who understands how to handle tools; they are made from the cheap materials of which the country abounds. Anyone who starts in bee-keeping may make use freely of this invention, as I do not desire to take a patent for it. I do not wish to multiply the number of patents which in most cases are nothing better than a source of inconvenience, trouble and loss for the inventor and the public.

Bee hives must be cheap. Expensive hives and complicated, fancy implements are a hindrance to apiculture. The system of bee-keeping must be simple, cheap and efficient.

The main reason that bee-keeping has not so far been a success in this country has been that the hives have been too cold for the dry season. Otherwise, since centuries, this country would flow in honey .

Bee-keeping ought to be encouraged

in this country by every means. The crop of honey of best quality is astonishing. An average of fifty (50) kilograms per hive each year may be expected by proper management. By the aid of the new inventions for extracting the honey it is turned into a first class article of commerce for home consumption and export which means a new great source of wealth for this country.

This kind of honey obtained by the use of the extractor, a centrifugal machine of simple construction, must not be compared with the stuff the Indians bring to the city. The extracted Mexican honey from the high table lands may conquer the world's market. It is of light, bright wine color, clear like crystal, of a pleasant sweetness and the finest flavor.

Bee-keeping in this country is quite different from that of the northern countries. This my experience has taught me. The bees act different and it is the same with their system of increase.

Our Correspondents

Appleton, N. Y., Nov. 24, 1902.

Editor American Bee-Keeper:

I am a reader and one of the greatest admirers of the American Bee-Keeper. I used to keep bees in the eastern part of this State and have been here three years, though I have kept bees but one year here. I think it a good location for the business, but the past season has been too wet for the secretion of honey, though we have an abundance of clover and other flowers. It is a fruit-growing district, and the fruit men welcome any one who will keep bees here. Many keep a few colonies, mostly in box hives and in a careless way. The only two practical bee-keepers anywhere near here claim to do very well with their bees. I have some of those yellow bees. They are very gentle—so much so that they will hardly gather enough honey to winter on. I have one colony of brown bees that gave me 114 one-pound sections of as nice honey as I ever saw; and they are in fine condition for winter. They would work when the others were not out of their hives.

Success to the American Bee-Keeper! Yours truly,

Jas. Godfrey.

Volant, Pa., Nov. 25, 1902.

Editor American Bee-Keeper:

I am a reader of your journal and keep a few colonies of bees. Will you please tell me through your columns how I can keep them from swarming? They swarm so much that I get but very little honey.

Yours truly,

W. E. Armstrong.

(Excessive swarming may be the result of an inherent disposition of the particular strain of bees against which the complaint is lodged. This trait is very marked in certain strains, while others, under the same conditions, show no disposition to swarm. A small hive is conducive to swarming. Lack of ventilation, and the direct rays of the sun upon the hive tend to induce swarms. Hence, a reversal of these causes will doubtless result in different effects. A queen of the current year's raising is not so liable to swarm as are those in the second or third year of their age. Therefore, requeening each season might yield the desired effect. However, casting of a prime swarm should not materially affect the honey crop, it being understood that the supers should be transferred to the swarm soon after the swarming occurs, and the bulk of the force of workers be thrown into the new colony, by the Heddon, or other plans of operation. It is exceedingly difficult to recommend any fixed rule for the management of all cases. Manipulations must be governed by the conditions existing in each particular case, as has been repeatedly demonstrated. Study, first, the cause, then proceed to remove it. —Editor.)

Pulaski, N. Y., Nov. 17, 1902.

Editor American Bee-Keeper:

I send you herewith an article for publication, on the Carniolan-Italian cross, which I think may be of interest to your readers. I like the American

Bee-Keeper very much. In my judgment, it is the best bee-paper published for the beginner. We have had a very poor season here this year. Next season I shall move my bees about 40 miles to what I think a better range. The farmers near here have discontinued the raising of buckwheat, so that I now get but about half a crop.

Very truly yours,
L. H. Perry.

(Mr. Perry's article, referred to above, will soon appear in these columns; and we are pleased to present his experience with the Carniolan-Italian cross to our readers.—Editor.)

Meadville, Pa., Dec. 15, 1902.

Editor American Bee-Keeper:

Dear Sir: The advertisement which you inserted in The Bee-Keeper has sold my entire stock of Italian bees, for which you have my thanks. Also I extend thanks to the W. T. Falconer Mfg. Co., for the kindness, and the elegant and neat supplies I have received from year to year, while keeping bees. Their promptness in shipping and the superiority of their goods cannot be surpassed. Your American Bee-Keeper has been everything to me. I could not have gotten along without its help in the apiary. Now that I am out of the bee business, I must ask you to stop sending it. It am sending you a list of bee-keepers to whom you can send samples and get others to take my place. I remain,

Yours truly,
P. A. Birch.

Cincinnati, Dec. 3, 1902.

Editor American Bee-Keeper:

Enclosed find remittance for next year's subscription.

All the honey I sold this season went direct to the consumer. Out of four hives I took 72 pounds of comb, and 19 gallons of extracted honey. I did not increase. I kept them all in their homes close to work, hence good results. I am getting ready for next season, extending the height of my hives 12 inches above the extracting super, for three tiers of comb cases. I've learned a point or two by experimenting with one hive. Next season they'll all be on the same principle. The said hive had four stories of surplus, one extracting, three comb honey cases of 24 sections apiece, jammed to the roof with honey. A prominent bee-keeper of our town after seeing my comb honey said he never thought I had such neat, clean and full sections. This is the second year of bee-keeping for me. The first year not a spoonful of honey on account of the drouth, the second year, a signal success. "Stick to it," is my maxim, "nothing succeeds like success." Next year I'll double my colonies, not by swarming, but by buying full colonies from so-called bee-keepers, of which I know a number. Eight colonies and no honey, one colony and no honey, and so on. Such are the reports we hear here and there from unscientific bee-keepers. Those are the kind I buy from; they are glad to sell out. As long as their bees are in good health and halfway strong, I buy them. After I have them they are built up ready for the field.

Respectfully yours,
Henry Reddert.

BEE BREVITIES

POOR LITTLE WILLIE.

A swarm of bees chased Willie
Till the boy was almost wild:
His anxious parents wondered
Why the bees pursued the child.
To diagnose, they summoned
Their physician, Doctor Ives,
"I think," he said, "the reason's clear,
Your Willie has the hives."

—Irish Bee Journal.

Gleanings says there is a greater scarcity of honey this fall than has ever been known before.

J. F. Garratt, in American Bee Journal, says there are over ninety bee-keepers in Uvalde county, Tex., and of these about one-half are specialists, and that apiaries average about 100 colonies. "On account of the drouth," says he, "this has been the worst year for bee-keepers in the history of the county. Not one apiary in ten has yielded any surplus, and many have required feeding."

A Frenchman, Derauchelle, has developed the idea of constructing foundation with square cells, for use in supers, to prevent the queen from laying in them.—Irish Bee Journal.

The December number of the Bee-Keepers' Review contains a number of excellent articles on the subject of national organization for the development and maintenance of the honey market of the United States.

"If you would have a first-class. high-toned, way-up, crackerjack smoker fuel, take cedar bark, tie it in bundles the proper size for your smoker, and cut it off the right length."—J. H. Wing, in American Bee Journal.

Capt.H. H. Robinson, of Port Orange, Fla., one of the "big guns" of East Coast beedom, and an old-time friend of The Bee-Keeper, dates a recent letter to this office from Matanzas, Cuba, where he has accepted a position in the Woodward & Landeta apiaries. The Captain has been having a tug of war with Bacillus alvei for sev-several months, on Cuban soil; and thoughtfully suggests that he is prepared to supply large, fat microbes in large or small quantities, to any Bee-Keeper readers who think of introducing foul brood into their apiaries.

R. F. Whiteside, Little Britain, Ont., writes that on an average, every 100 acres in his vicinity raises ten to twelve acres of alsike. He secured an average per colony of about 70 pounds last season One-half of the crop had been contracted a year ago at 7 1-2 cents. For the other half, he got eight cents per pound. He states that J. L. Byer, 24 miles north of Toronto, secured 20,-000 pounds from 190 colonies, and the crop was taken at 8 1-2 cents a pound by Christie, Brown & Co., the well-known wholesale bakers of Canada.

Mr. W. W. McNeal, our correspondent who represents the Buck-eye State in our full-page group this month, writes that his bees went into winter quarters this season in better condition, as to strength and stores, than usual. In concluding a personal letter, he says: "White clover is wonderfully in evidence, and the yield from it during the past season was better than for a number of years past. So, you see, my hopes for a good crop of honey next year, are pretty well sprouted." We have no worse wish for Mr. McNeal than that his hopes may be fully realized.

Mr. Jas. Godfrey, of Appleton, N. Y., sends us a page from an "agricultural paper" called the "Country World," published somewhere up in Western New York. It is the apicultural page from its September, 1902 issue, and gives a lengthy account of the Utter vs. Utter case as if it were something to be tested in the courts at a future date. This "agricultural editor" has "a dispatch from Warwick, N. Y., to the effect that if the justice's decision is sustained on appeal, serious consequences to bee-keeping interests of New York State will result. Has the Country World's "dispatch" been two whole years in transit, or has the Country World been dead for two years?

As a result of the publicity which "Pat" has acquired through these columns, the eyes of the bee-keeping world seem to be focused upon him. American, European and Australian journals have copied and commented, while we have received numerous letters of inquiry in regard to his operations. To his many friends and admirers we have to report that under date of Nov. 21, 1902, he writes The Bee-Keeper from Cabanas, Cuba, stating that he was delayed at the custom house at Havana for three days, and again three days by storm, so that his loss of field bees amounted to about one-half of the force, and forty colonies were so depopulated as to necessitate doubling up. He had then bought ten colonies in boxes, a beautiful pen-sketch of which he has kindly set us. We are pleased to report, in his own words, the following: "I have at present 218 swarms, working just as good as I want them to work. Breeding and whitening the combs and honey coming in just as good as I want it to come." He has deferred queen rearing operations until Dec. 15, when things will be more favorable. Pat says the Cubans in his vicinity look with wonder upon American hives and operations, and that his is the first modern apiary ever exhibited in his section of the country, though he has a Cuban neighbor who has 300 colonies in native boxes, etc. Pat favored us also with a sketch in black and white of the native houses and the public thoroughfares. The roads, he says, are something like this, on the surface, mmmmmmmmmm. We shall endeavor to have the sketches reproduced for the benefit of those who desire to follow Pat closely, as the details are characteristically minute, and will prove a veritable delight to his students.

Mr. John M. Hooker, the venerable apiarist of Philadelphia, whose portrait appears in our group this month, sends us the following clipping from the New York Evening Post. Like ourself, Mr Hooker does not take any stock in the theory advanced:

Careful study has revealed the fact that the relation between flowers and bees is more complicated than was ever believed. The eating or gathering of honey is not peculiar to the bee alone, but is indulged in by wasps, hornets, flies, ants, humming birds and other animal species. Probably all of these carry pollen from one blossom to another and bring about the fertilization so needful to the perpetuation of plant life.

The short-billed humming birds are found to carry away pollen upon the feathers of the head, while bumblebees and several species of hornets often rival the honey bee in the completeness wherewith they rub off pollen from every flower.

Recent investigations seem to indicate that the production of honey is not natural to flowers, but is the result of a pathologic process based on the action of an animal ferment introduced into the base of the petal from the saliva or other secretion of a bee. The sap of the petal contains a very small amount of sugar, but larger quantities of soluble and insoluble starch. A slight scratch or perforation will cause an exudation of this sap, which is not particularly sweet and not at all like honey. But if to this sap be added a ferment, such as ptylin or yeast, the starch, and, it may be, a small amount of cellulose, are converted into glucose, and saccharine fluid is the result.

The fact seems to be utilized by the honey bee On entering a flower he apparently scratches or abrades the base of the petals near the sap vessels, moistens the raw surface with saliva or other secretion, gathers honey or flies on to the next flower. In the ensuing twenty-four hours a globule of sap forms on each abrasion, in which the starchy elements have undergone a fermentation into sugar.

The flavor of the honey depends partly on the flower and partly on the ferment.

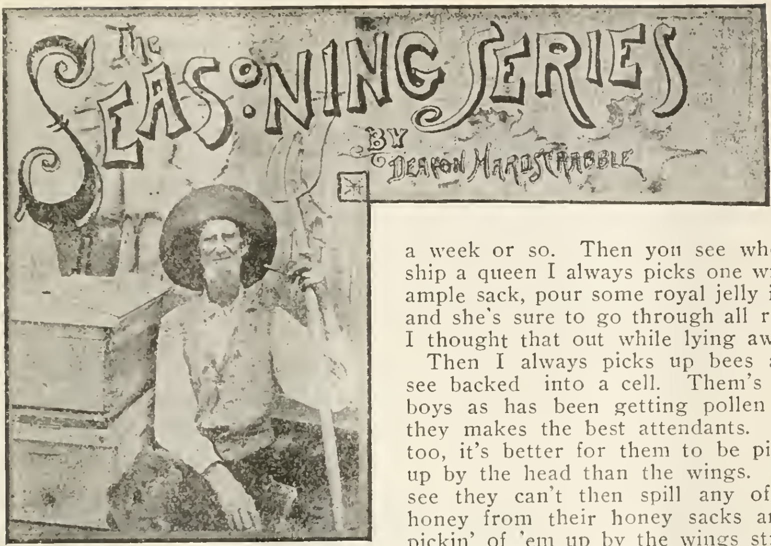
It is the latter which causes all honey to taste more or less alike, and which prevents the Western manufacturers from making a good artificial honey out of glucose. They can imitate the color, consistence, and even the floral flavor perfectly, but the so-called honey flavor has never yet been obtained.

An anonymous writer in Progressive Bee-Keeper tells of having received from the mails a No. 10 shoe-box containing two worker bees. These were escorts which had escaped from a cage containing a queen that had been mailed him by a breeder. The postal clerks had captured the workers, perhaps thinking them valuable, put them in the big box, wound it with fifty feet of twine, punched it full of air-holes and marked it in several places, "Bees." The thoughtful employees of the government had placed in the box a little dry sugar, as provision for the remainder of the trip. The two workers were thus delivered to the hand for which they were intended by the shipper. The author of this interesting item of bee news, remarks: "Say, is it not amusing how little some people know about bees!" Well, perhaps, but may be not more so than the "average" bee-keeper would be if unexpectedly required to assume the duties of one of Uncle Sam's postal clerks.

The gift of silence has saved many a reputation.

The hard-headed man is sometimes an easy mark.

Happiness and success are synonyms, but success and happiness are not.



The Seasoning Series

By Deacon Hardscrabble

Dear Bro. Hill:

Talk about a-taking off of your coat and a-rollin' up of your sleeves to get a ready to do things, why 'taint in it with ex-manager Bro. Abbott, who has even a taken off his whiskers in preparin' for the fray, and say he's just a whooping things. He's a-makin' our "humble servants" look like thirty cents. Gosh, but how he shows up their wire pullin'. If they ever should get to their feet long enough to hit back, how they would slug him. Just tell Emerson to rip along and never fear, for their footing is too uncertain. It's only the wicked who stand on slippery places; t'other kind of folks can't, and you know all those dearly beloved insist that they ain't wicked a little bit, and they ought to know. Modesty is a great thing, a very great virtue. I'm a modest man myself as you well know, Harry.

Ah, I'm tired of hearin' the boys say my umbillycussed queens aint no better than theirs without the cuss. Why my queens have it so perfectly developed that it forms a mighty cute little sack and they carry their extra food about in it. Yes siree! The idea of a calling queens good that leave the umbillycuss a ramifyin' through the royal jelly in the cell after they've a left it. Why sir, my queens carry off the jelly in their sacks and use it for lunch for a week or so. Then you see when I ship a queen I always picks one with a ample sack, pour some royal jelly in it, and she's sure to go through all right. I thought that out while lying awake.

Then I always picks up bees as I see backed into a cell. Them's the boys as has been getting pollen and they makes the best attendants. And too, it's better for them to be picked up by the head than the wings. You see they can't then spill any of the honey from their honey sacks and a pickin' of 'em up by the wings strains the muscles of their backs and is liable to develop lumbago, ruining 'em for future use even if they don't die in transit.

The Humane Society oughter get after those boys who don't take care of them attendants that come with a queen. It's cruel to turn 'em loose in a cold and heartless world to shift for theirselves with neither home or mother. It's agin natur', and 'taint politic neither. Like as not they'll get in somebody's bonnet and make 'em vote against the meek and lowly, though thoughtless gent as turned them adrift, him as holds office by divine right. Tell Emerson it is sacrilegious to try to prevent their continooin' in office.

While I was a reading of that simposyum on shooked swarms, I most choked a-laughin' over the boys as thought it something brand new. Why, sir, my granddad did that afore I was born and my earliest remembrance of bees was his a-tryin' to shooken a shooked swarm from a shaky gum, and the blamed thing shaked in two, a-lettin' all the combs and a whole passel of mad bees into a heap on the ground. Gosh, I can feel them stings yet. Granddad quoted scripter faster than any of the boys do it now. You see the shaky shooked gum was too long, slim and tall and wouldn't let the bees be shooked out easy, so granddad was a thumpin' it on a springy fence rail, just same principle as Rambler's jouncer. (Say, tell R. that name is wrong, it oughter be a "shookeree".) After that the old gent cut his gums from large logs and in short or shallow sections, and he got a right smart more honey and the shooking business was a heap easier.

One winter most of the bees died in them shallow gums and the old man was a--goin' to burn 'em, but one day a feller who was going down the river stopped over for dinner and seein' them hives asked about 'em. Say, you'd a grinned to split to have heard the virtues of them ere gums. 'Fore that feller went he'd traded a hog for all the empty gums 'cause where he lived 'twas prairie country and big logs warnt to be had. It seems granddad had heard that great big gums was the best, so he went in for 'em, regular Jumbos. But he had to give up the shakeree biz because it took two men to move the big gums when full. But them big gums was the thing for his locality, sure.

I learnt from that, that when my goods aint no good in some other chap's hands, it's the fault of "locality" b'gosh. Yours as ever,

John Hardscrabble.

THE Bee-Keeping World

SWITZERLAND.

Honey bees are not taxed in Switzerland. The government considers bee-keeping a branch of agriculture, and nothing pertaining to this is subject to taxation.

GERMANY.

In speaking of a certain recently introduced bee-hive Wilkins says in Phaelzer B. Z. that many bee-keepers imagine that bees require but very little air and they therefore neglect to ventilate their hives sufficiently. The consequence is, that such hives are too damp in winter. Dystentery and other diseases are then the result and the bees die. He wants his bees well protected against cold, but at the same time well ventilated. He also favors a larger brood-frame than the standard German frame which is 37x23½ centimeters, thinks that 37x27 centimeters give better results, as the bees have then a chance to store an ample supply of food in the upper part of the frames. Honey thus stored is always accessible to the bees, and as long as it lasts they cannot starve. In the spring bees bred up much faster when on a frame 27 centimeters wide than in one 23½.

When the bee journals of Germany speak of artificial queen cells, they do not mean the cell-cups as used for queen rearing by American breeders, but the large, roomy cell used for confining the queen when introducing her. This method of introducing queens by a large wax cell, seems to be very popular. The cells are made very light, dipping but once.

Dickel says in Die Biene that he cannot understand how people who are fully acquainted with the unvarying behavior and the general conduct of the bee can attribute to so low an order of creation, intelligence, faithfulness, love, industriousness and other virtues, and represent them as worthy of imitation by human beings. He says that all the actions of the bee serve unconsciously to them, the only purpose of self-preservation and the propogation of the race; that all members of a colony contribute their share according to their individual animal instinct and desires to accomplish this end.

Kaemph writes in Illustr. Bztg. that one of the mistakes beginners often make is to pack their bees too warm.

Gravenhorst's Ill. Bztg. publishes a historical sketch of the life of the late Chas. Dadant in which, by the way, it is said that when Mr. D. was in the queen business he found that when queen cages were provided with heath or buckwheat honey queens invariably died before reaching their place of destination. Esparsette honey and "Good" candy proved a success.

Phacelia as a honey plant is talked of a great deal in Germany as well as America. (Singularly enough, after making several plantings the past season the writer of this article is not at all satisfied that the plant is of any value.)

Schroeder in Centralblatt is clamoring for uniform prices of honey. This is no wonder, for prices do vary greatly in different markets, ranging from 75 to 125 marks per pound. Schroeder does not favor a honey trust, but thinks the Government might do something to give firmness to the honey market. It seems the German government issues a circular or bulletin from time to time in which the prices of the principal articles of food are published. "If," he says, "the prices of honey were included in these, a uniform price would be established."

ITALY.

The bee-keepers of Italy have formed an association with the seat in Ravenna. The object is the purchasing of supplies and the disposing of their honey.

ENGLAND.

The British Bee-keepers' Association has arranged for special market days on which honey is to be offered for sale in London. It is hoped to thus bring buyers and producers together and affect many sales.

HUNGARIA.

During 1901 the Hungarian Honey Commission has disposed of about 110,500 pounds of honey for the bee-keepers of that land. As is known the bee-keepers of Hungaria, Austria and Germany have held joint meetings for years, still the interests of the Hungarians somewhat collide with those of Germany. The former want a low tariff on honey in order to unload their surplus upon Germany. The Hungarians seem to have a surplus of honey, while the Germans cannot boast of this. There is another unpleasant feature about these joint sessions. When meetings are held in Hungaria the Hungarian language is the predominating one, and the bee-keepers from Germany, having traveled many miles to attend the sessions, lose the greater part of the discussions, etc. How these matters may be harmonized is a question.

A large experimental apiary has been established in Goedoelloe near Budapest by the Hungarian government. Three hundred colonies are kept. Instructions in bee-keeping and hive-making are given gratis, including board and lodging. Bee-keepers without means are often materially assisted and receive bees and hives free of charge. This, it seems, ought to stimulate the business.

BRAZIL.

It is stated in Schlavg. Holst. Bztg. that a Brazilian bee-keeper has invented a honey-extractor by which the honey from both sides of a comb may be thrown out at one operation. [The idea is not a new one. The honey from a whole super may be thrown out at one operation without moving one comb separately, providing no comb is allowed to become sealed.]

AUSTRIA.

The Austr. Bztg. says: It is useless to furnish a young swarm with a full set of combs. Experiments made, showed that the swarms hived on starters only were heavier and in better condition than those hived on full combs. [Location(?)]

Baron Ambrozy, also Alfonsus, claimed before the Wanderversammlung that the feeding of sugar makes bees susceptible to disease, particularly to foul brood. Reidenbach has long ago come to the conclusion that sugar is lacking the antiseptic properties the honey has, owing to the formic acid, etc., contained in the latter.

Goebharter has this to say in Bienen-Vater about queens: "As every bee-keeper knows the extreme age of a queen is four years. Should perchance she live beyond this age she is worthless. Even in their third year many queens do not come up to the requirements. A good prolific queen is necessary for best results and the wise bee-keeper will therefore see to it that his colonies are always headed by such." On this point Fraberger says in the same number of B.-V. that the bee-keeper should not be satisfied to merely have a queen in each hive, but he should also know whether she is old or young, prolific or not, fertile or not, etc. Still, he says, it is not advisable to interfere with the brood nest very often. A few examinations each year will suffice. Queens older than three years should always be replaced by younger ones.

FRANCE.

The honey crop is light. In the best localities 20 to 30 pounds has been taken from each colony, but the average throughout the land is less than 10 pounds.

F. Greiner.

GRADING RULES OF THE COLORADO STATE BEE-KEEPERS' ASSOCIATION.

COMB HONEY RULES.

No. 1. section to be well filled and capped, honey white or slightly amber, comb white and not projecting beyond the wood, wood to be cleaned; cases of separatored honey to average 21 pounds net per case of 24 sections, with a minimum weight of not less than 20 pounds for any single case; cases of half-separatored honey to average not less than 21 3-4 pounds net per case of 24 sections, with a minimum weight of 20 3-4 pounds for any single case; cases of unseparatored honey to average not less than 22 1-2 pounds net per case of 24 sections, with a minimum weight of 21 1-2 pounds for any single case.

No. 2. Includes all amber honey of a pronounced tinge and all white and amber honey not included in No. 1; to be fairly well sealed, uncapped cells not to exceed fifty in number exclusive of the outside row, wood to be well cleaned; cases of separatored honey to average not less than 18 pounds net per case of 24 sections; cases of half-separatored honey to average not less than. 19 pounds net per case of 24 sections; cases of unseparated honey to average not less than 20 pounds net per case of 24 sections.

EXTRACTED HONEY RULES.

Extracted honey shall be classified as white and amber, shall weigh 12 pounds per gallon, shall be perfectly free from particles of wax, and shall always be marketed in new cans. All rendered honey, whether obtained by solar heat or otherwise, shall be classed as strained honey and not as extracted.

RECOMMENDATIONS.

It is recommended to sell all cull honey around home as much as possible, to grade only in daylight, near a window; to use the standard 4 1-4x4 1-4x1 7-8 inch section and the 24 pound double tier shipping case, in order to have uniformity in loading cars; to stamp all cases of No. 1 honey with the owner's name above the hand-holes; to mark all cases of No. 2 honey with two dashes in the handholes at each end of the case, and with no other marks whatsoever; to use no second-hand cases for No. 1 and No. 2 honey; to pack all sections with paper below and above, and in double-tier cases to put a sheet of paper between the tiers; to store comb honey in a warm, dry place, protected from flies and dust; and to haul carefully, well protected from dust and rain.—From an official circular issued by the Association.

We are indebted to the A. I. Root Co., Medina, Ohio. for a copy of the 1903 edition of the A B C of Bee Culture. In the new edition a pleasing change has been made in the binding; many new engravings and much interesting matter have been added. By a system of constant revision, the A B C is kept as nearly up-to-date as is possible, and is, unquestionably, the most exhaustive and minutely explicit work on bee-keeping that we have. The new volume contains nearly 500 pages, and in typography and general make-up, reflects much credit upon the publisher.

THE AMERICAN BEE-KEEPER

PUBLISHED MONTHLY BY

THE W. T. FALCONER MANFG. Co.

H. E. HILL, - EDITOR.

Terms.

Fifty cents a year in advance; 2 copies 85 cents; 3 copies $1.20; all to be sent to one postoffice.

Postage prepaid in the United States and Canada; 10 cents extra to all countries in the postal union, and 20 cents extra to all other countries.

Advertising Rates.

Fifteen cents per line, 9 words; $2.00 per inch. Five per cent. discount for two insertions; seven per cent. for three insertions twenty per cent. for twelve insertions.

Advertisements must be received on or before the 15th of each month to insure insertion in the month following.

Matters relating in any way to business should invariably be addressed to

THE AMERICAN BEE-KEEPER,
Falconer, N. Y.

Articles for publication or letters exclusively for the editorial department may be addressed to
H. E. Hill,
Fort Pierce, Fla.

Subscribers receiving their paper in blue wrapper will know that their subscription expires with this number. We hope that you will not delay favoring us with a renewal.

A red wrapper on your paper indicates that you owe for your subscription. Please give the matter your early attention.

Editorial

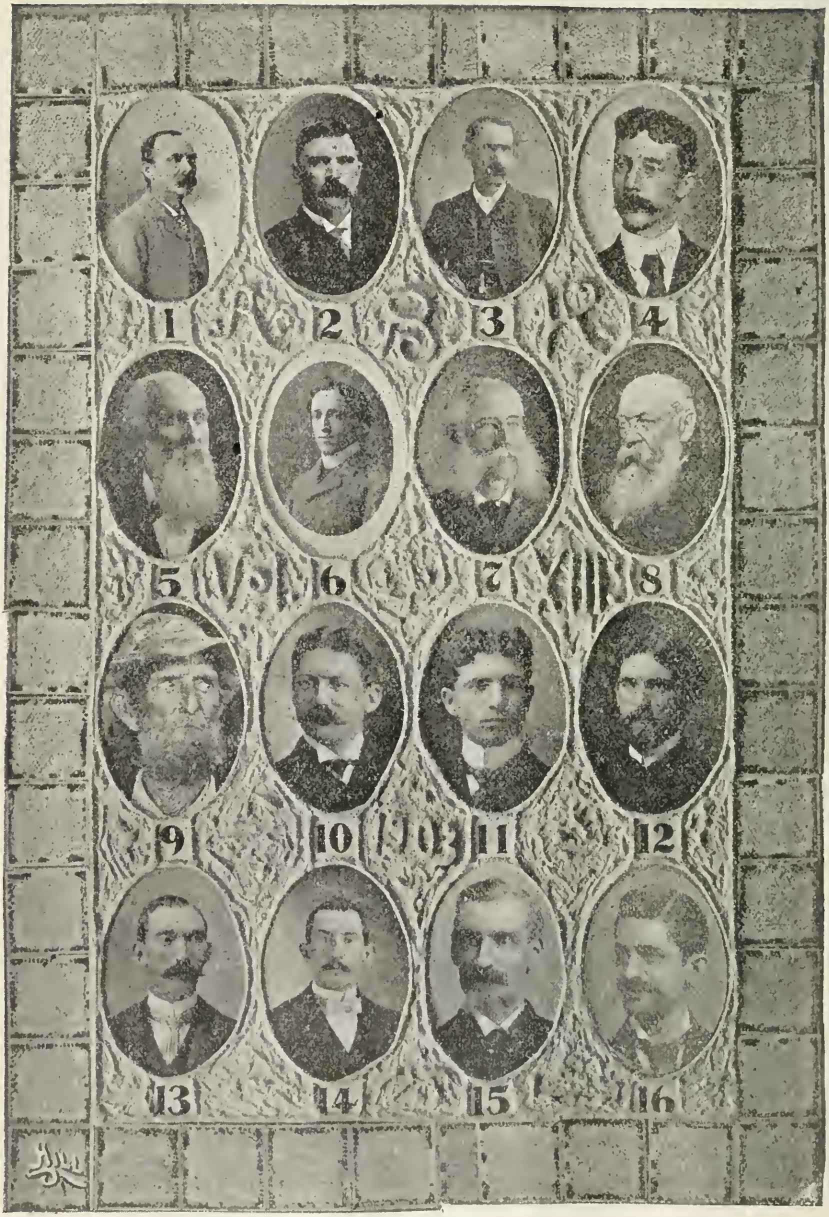
A REFORM WHICH MUST COME.

It seems necessary to again refer to the injustice which honey dealers are doing the Southern producer, by quoting "Southern" honey. Every few years this habit breaks out anew, and the progressive bee-keeper of the South is obliged to enter into lengthy correspondence with the dealer, in defense of his product. Being a clear case of misrepresentation, the dealer soon recognizes the fact and promises to discontinue the practice. The reform lasts until a change is made in the clerical force, or other circumstances are brought to bear which result in its utter disregard, when the apiarian journals are again supplied with a batch of quotations in which the word "Southern" stands for inferiority.

It is doubtless a fact that the South puts upon the market a larger percentage of low grade honey than any other section of the country. The unprogressiveness of many sections of the South is well known. The product of the "bee-keeping" element in such localities, as well as that of other branches is necessarily inferior; but this is no reason why the up-to-date producer of the South should have to suffer the stigma which belongs, obviously, to a product which he has not been guilty of placing upon the market. The following paragraph is extracted from a letter recently received from a northern dealer, and was written in the course of some correspondence upon this subject:

"We will agree with you that there are many good honey raisers in the South, who put up their honey as it should be; but, so long as there is so much 'Southern' in evidence, the innocent will have to suffer."

Well, maybe they will; but they need not, if the dealer and the editors of the journals through which the dealer quotes, will see to it that this unfair practice is discontinued. The writer is not altogether green in the matter of honey and the different grades and degrees of merit which is in fact, and by supposition contained in the products of the various parts of America. He has produced and handled honey more or less extensively for the past twenty-two years; and by practical experience has become tolerably conversant with the regulation product of the Northern States, Canada, California, Florida and Cuba; and without fear of successful contradiction, he asserts that all the inferior honey on the markets is not barreled by Southern bee-keepers, by a long shot. And if it was, this would be no valid reason why dirty honey should be characterized as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OUR STAFF, FOR 1903.

"Southern," so long as all Southern honey is not dirty. Supposing, for example, there existed in New York City or in Cincinnati, a fraudulent honey dealer. Continue the supposition to the point where it might be acknowledged that it was impossible to obtain a pure article of honey from this dealer in New York or Cincinnati. Suppose, again, Chicago and Boston were not known to harbor any such fraudulent element. Would the dealer in New York or Cincinnati who did a square and upright business, contend that honey of an inferior quality—honey that was known to be adulterated and filthy—should be designated habitually as "New York," or "Cincinnati" honey? Such a plan of quoting would be very unjust to the fair business man in New York or Cincinnati; but not one whit more so than the present manner of quoting dirty honey as "Southern." Why not, instead of quoting "Southern," at two or three cents below the ordinary market, when it is intended to specify filthy stuff, "inferior," "dirty," "low grade," etc., etc. Our language is not so poor that appropriate words are not to be found to say about what is meant.

The South produces hundreds of tons of honey annually, which is not at all inferior to the average product of the Pacific Slope, or the Northern or New England States. And the producers of such goods are "sick and tired" of the persistance with which some dealers continue to call inferior honey, "Southern."

OUR CONTRIBUTORS.

In presenting the pictures of sixteen of the gentlemen who will help to make the American Bee-Keeper for 1903, which is shown on another page of this number, our pleasure is mingled with a degree of pride, which we believe is justifiable; and we congratulate ourselves and our readers upon our mutual good fortune in having elicited such an aggregation of experience and talent, not only in the line of practical and scientific apiculture, but as entertaining and instructive writers. We should have been pleased to show pictures of others whose friendship has been asserted, and from whose pens our readers will have instructive reading, but we were unable to secure photographs.

For the benefit of the younger subscribers who may not be able to identify all the pictures shown, and as an introduction of the new faces to all, we append a "key:"

1. F. Greiner; 2. Thos. Chantry; 3. James Heddon; 4. C. S. Harris; 5. O. O. Poppleton; 6. E. F. Atwater; 7. W. S. Hart; 8. John M. Hooker; 9. Deacon Hardscrabble; 10. Arthur C. Miller; 11. John M. Rankin; 12. Frederick B. Simpson; 13. W. W. McNeal; 14. Harold Hornor; 15. Adrian Getaz; 16 M. F. Reeve.

The gentlemen comprising the group have all won success and distinction with the smoker, and most of them have acquired additional honor with the pen. Without exception their motives in writing for the press is to assist in the development of our industry, and their pen-productions have not that machine-made air about them, which characterize the writings of those who put the pen to paper only for so much a word, and market it where the highest cash price can be obtained. To such men the bee-keeping fraternity owes a debt of gratitude. To the unselfish efforts of such men we must credit a large proportion of modern apiarian achievements, and to such magnanimous minds we must look with hope for future progress and the ultimate establishment of apiculture upon a solid and systematic basis among the recognized industries of the United States.

ARE WE DOING OUR BEST?

Reflecting upon the disadvantages under which the past generation has had to labor, in the acquisition of apiarian knowledge; and in view of the improved methods, appliances, numerous good periodicals and books within reach of every present-day devotee, we have many times been led to wonder whether we fully appreciate and make the best of our privileges. The thought has again been aroused by the receipt of a recent letter, from a struggling bee-keeper in the interior of far-off Japan. In order to learn what is being accomplished in the great round world, this isolated aspirant of the Land of the Mikado, is obliged, first, to acquire a knowledge of a foreign tongue. His love of bees has stimulated an appetite for knowledge beyond that afforded in the literature of his own country. Every item of information which sheds a ray of light upon the subject by which he has been fascinated, is appropriated and cherished as a precious morsel. As an example of his commendable efforts, and as an illustration of the great difficulties under which these efforts are exerted, it is no violation of confidence, we think, to reproduce in his own style an extract from the missive referred to:

"Mr. H. E. Hill,

My Dear Sir. I am a poor bee-keeper who have a few colonies in my back-yard, and am also a reader of The American Bee-Keeper, and I ask you the question on the bee-keeping. Please send me the answers by mail.

"1. How will do to compound the royal jelly to rear queen cells?

"2. How will to do the proportion of feet to be give instead of collen for the broods?

"3. What are very best in all the methods of queen-rearing performing in American at present?

"4. Which are most appropriate for a beginner in the text-books on a list of 'books for bee-keepers' in the advertisement in the American Bee-Keeper?"

Observe the candor, of our correspondent. Reflect upon the exertion which was necessary in order to make the appeal for light. Consider the determination which actuated his effort. Imagine, if possible, the delight that he would derive from an ability to read and comprehend all that is written in English upon the subject of apiculture. Consider his great disadvantage, as compared with ourselves.

Is there not something in such an appeal which touches the heart of every bee-keeper, and reveals the opportunity that is before him? As we have observed elsewhere, we are led to wonder whether we are making the best of our advantages.

The Rocky Mountain Bee Journal observes that "production is the easy side to successful bee-keeping. Distribution is the hardest task." And this fact is becoming daily more apparent.

A remarkable example of comb-building in the open air, and an instance in which the combs penetrated the snow which spread to the depth of a foot upon the ground, is illustrated in the September number of the Bee-Keepers' Record, of London, England. Through the kindness of Editor W. Broughton Carr we have secured the original photograph, which will be reproduced in these columns next month.

Every subscriber to this journal is invited to freely participate in the discussion of any and all subjects in which he feels an interest. All apicultural knowledge is derived either through the generous courtesy of our co-workers or a combination of this and personal observation and genius; hence our responsibility one to another, for a free and unselfish exchage of ideas, in order that the wheels of progress may not be staid by the necessity for individual experiment at each step.

Maurice Maeterlinck's charming book, "The Life of the Bee," which has been repeatedly derided, ridiculed and defamed by a few of that class who grasp every opportunity to air their superior knowledge of apicultural matters, is refreshingly defended by Mr. C. P. Dadant, in a recent number of the American Bee Journal. It's a blessed good thing for the fraternity, and humanity in general, that the self-sufficiency and egotism of all men is not such as to preclude charity for the trivial failings of their fellows.

The editor of Gleanings has reliable information to the effect that at present Cuba produces about 200 carloads of honey annually, and that it is not too much to suppose that it is capable of producing 500 carloads. He says: "California has put out in one season an amount equal to this. But probably Cuba has better and more extended resources than any other province, state or island on this hemisphere." And still, West Indian competition cuts no figure (?). We wonder what has become of the American Bee Journal's correspondent, Mr. Rockenback, who gave up Cuban apiculture as a lost cause, several years ago.

Mr. C. A. Hatch, Richland Center, Wis., has been appointed to fill the vacancy in the board of directors, caused by the resignation of Mr. Dadant, which was noted in our last issue. Mr. Hatch will be "right at home" in his new position, as he has had considerable experience in the honey-producing sections of the far West, and was there associated with some of the honey exchanges. While all regret the retirement of Mr. Dadant, it must be acknowledged that the National's executive committee has made a wise choice in the selection of Mr. Hatch as his successor.

C. A. HATCH.

As a means of conveying ideas in many instances the camera serves even better than the pen. Many of the editors of bee journals, as well as many bee-keepers, of this and foreign countries are quite expert photographers, and the resulting pictures are an interesting feature of the journals. We should be pleased to publish more pictures in the American Bee-Keeper, if they were obtainable; and would take pleasure in rendering any possible assistance in helping any reader to get started in the photographic field.

We have a solid twelve months before us, in which to put those good resolutions into effect.

We have been somewhat surprised to note the interest manifested by our readers, in the editorial which appeared in the December number, entitled, "Groundless Suspicions." The many letters received, commending the attitude of The W. T. Falconer Mfg. Co., reveal the fact that their patrons have viewed the situation from the same standpoint as the writer, and that they share his appreciation of the impartial efforts in behalf of bee-keepers, which the publishers are putting forth.

Press Bulletin No. 29, issued Sept. 1, by the Agricultural Experiment Station of Florida, entitled "Food Adulteration," deals in a forcible and logical manner with this subject, and presents a long list of food products that are frequently adulterated with cheap, and in many instances injurious substances, which includes extracted honey and glucose. In view of the fact that many states have stringent laws for protection against such imposition, the adulterator's field is being slowly narrowed down; and, as a result, the state which has failed to take legislative action in the matter, has become the common dumping-ground for all sorts of unwholesome mixtures excluded from others more progressive, as being unfit for food.

Owing to the fact that the introduction of queens in the spring necessarily interferes to a greater or less extent with brood rearing, etc., at a time when every day should be made to count in building up the colony, it has long been advised to requeen in the fall; that is if any changes are to be made. Queens are usually more plentiful and consequently cheaper in the fall than in early spring, too. In the Progressive Bee-Keeper for November Mr. Doolittle calls attention to an additional advantage of fall requeening. He says: "It is almost the easiest thing imaginable to introduce a queen in the late fall, after the brood has emerged from the combs." He simply removes the old queen, waits two or three days and then drops the new one right in among the bees.

We desire to say to our subscribers that if any wish The Bee-Keeper discontinued at the expiration of the time for which it is paid, it is necessary only that they notify us to that effect. We have no inclination to impose our journal upon those who are not interested in it; but when a subscription is received, the supposition is that the subscriber desires it continued to his address until such time as he may order it stopped. It is neither business-like nor honorable for a subscriber to receive copies of a publication for six months or a year in advance of the time paid for, and then "refuse" to take it from the postoffice. We have no difficulty in placing our monthly editions in the hands of those who are interested in them and are willing to pay for them. We cannot say that we "are pleased" to strike a name from our list; we dislike very much to lose a single subscriber, but we dislike much more to print and mail papers for several months to some one who does not appreciate them. A request to discontinue The Bee-Keeper will always have the same prompt attention that is given a new subscription, and the time to make the request is before the subscriber has allowed himself to become indebted to the publishers for papers sent to him in good faith. There is a manly, business-like, way of doing it, and a very discourteous, sneaking manner of accomplishing the same end. The editor's former connection with several newspapers, however, clearly demonstrate the fact that bee-keepers, generally, are of the "manly" class. We very seldom have occasion for complaints of this kind against our subscribers; but there are evidently a few in the field who, probably through ignorance, disregard every rule of business etiquette.

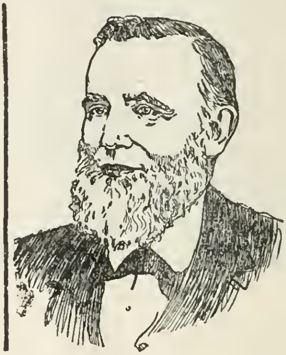
WHICH IS THE MOST HOPEFUL FIELD OF LABOR FOR THE NATONAL ASSOCIATION.

Delivered at the Denver meeting of the National Bee-Keepers' Association by Dr. C. Miller.

Candidly, I don't know. There is the protection of bee-keepers in their right to keep bees where they like, a field that has been well worked, and rich has been the fruitage. But it can hardly be called a hopeful field, "For what a man seeth why doth he yet hope for?"

There is the fight on adulteration. A lot of good has been done in working that field, and the end is not yet. Possibly the end is yet so far off that the greatest hope lies in that direction.

It is quite possible, however, that a more hopeful field lies in another direction. Consider what has been done by the government for all the different branches of agriculture except bee-keeping. The direct governmental aid, the able work done at the various experiment stations there is need only to make the merest suggestion of such things to bring before your minds the millions of benefit to the country from them. Compared with all this, what has been done for bee-keeping? The one man in Washington, the professors at some of our colleges and experimental stations so few in number that their names are soon recited—these are not forgotten; but however able may have been the services they have rendered, "what are they among so many?"



DR. C. C. MILLER.

Some may be surprised to know that this nation is decidedly behind other nations in this respect. Cross the water and you will find various governments making direct grants of considerable money to the various bee-keepers' associations. Whether that be desirable here may be subject to question, but it would not be hard for this association to formulate a request for aid that might be of immense benefit. One of the maxims of a man who claims to get an unusually high price for honey, "If you don't ask it you won't get it." Possibly it may be worth the while for us to consider whether we should not do some asking.

It is reported that a St. Louis boy ate so much honey he was attacked by hives.

SHINE!

The Empire Washer Company, Jamestown, N. Y. makes a Shine Cabinet, furnished with foot stand, blacking, russet dressing, shoe rubber—in fact, all articles and materials needed to keep shoes looking their best—and it is made to be fastened to the wall of the toilet room or kitchen, it does away with the vexatious searching after these articles which is altogether too common. A postal will bring you details of this and other good things.

HONEY AND BEESWAX MARKET.

WASHINGTON GRADING RULES.

Fancy.—All sections to be well filled, combs straight, of even thickness and firmly attached to all four sides; both wood and comb unsoiled by travel stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy white," "No. 1, dark." etc.

New York, Dec. 16.—There is a fair supply of honey, though the demand is not as brisk as it has been. We quote, fancy comb, 11 1-2 to 15 cents. Extracted, 4 1-2 to 5 1-2 cents. Beeswax: The supply is not liberal. Supply, fair. Francis H. Leggett & Co.

Kansas City, Nov. 11.—We quote comb honey, 14 to 16 cents. Goood demand and fair supply. Extracted, 5½ to 6½ cents. No beeswax on market, at 30 cents.—Hamblin & Sappington.

Cincinnati, Oct. 13.—The demand for extracted honey in this market is good, and finds ready sale as follows: Amber, 5½ to 6 cents. White clover, 7 to 8 cents. Beeswax, 28 cents. We are cash buyers.

The Fred W. Muth Co.

Buffalo, N. Y., Dec. 9.—The Buffalo honey market has been a very firm one so far this season, and receipts are light. Sales at present, fancy, 16 to 17 cents. Other grades from 15 down to 12 cents. Prices will probably be sustained. Some extracted is selling in small tumblers at about $1.00 per doz.

Batterson & Co.

Chicago, Dec. 8.—There is no special charge in the honey market, prices remain as last quoted and the volume of sales are not large. The weather is such as usually prevails at this season of the year and the cold may induce people to buy more freely. Best lots of fancy white comb honey bring 16 cents per pound. No. 1 to choice 15 cents, off grades 2 to 5 cents less and not much demand for them. Extracted 7 to 8 cents for white, amber 6 to 7 cents. Beeswax 30 cents.

R. A. Burnett & Co.

Cent-a-Word Column.

It frequently occurs that some member of the Bee-Keeper family desires to advertise for sale some article the value of which will hardly justify the payment of our regular rates; and yet it would be an accommodation if he were permitted to tell others what he has to offer. Some other reader may be in need of just such an article as that of which he wishes to dispose. Again, it is as frequently desired to exchange commodities for which we have no especial use, for something more desirable, and such exchanges are often made to mutual advantage. We have, therefore, decided to place at the disposal of our readers a column devoted to the accomplishment of these ends; though we cannot be responsible for any possible dissatisfaction which might arise as a result of such exchanges. The rate will be uniformly one cent for each word, each month; no advertisement however small will be accepted for less than twenty cents, and must be paid in advance. Count the words, and remit with order accordingly.

WANTED—To buy 50 or 75 colonies of bees in Florida. Address Jacob Alpaugh, Box 8, Galt, Ont., Canada.

WANTED—To exchange six-month trial subscription to The American Bee-Keeper for 20 cents in postage stamps. Address, Bee-Keeper, Falconer, N. Y.

AGENTS WANTED to sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Jamestown, N Y.

FOR SALE—A Hawkeye, Jr. Camera Complete. Uses both film and plates. Cost $8.00. will sell with leather case for $3.50 cash. Address Empire Washer Co., Falconer, N. Y.

A TANDEM BICYCLE (for man and lady) cost $150. in first-class condition, was built to order for the owner. Tires new. Will sell for $25 cash. Satisfaction guaranteed. Address J. Clayborne Merrill, 130 Lakeview ave., Jamestown, N. Y.

TO MAKE CLEAR, beautiful photographs use a Turner Camera. Simple, excellent, inexpensive. Dixie Developing paper and Tubes have simplified the picture-making art. We refer, by permission, to editor of The Bee-Keeper, who has used over fifty gross of Dixie paper. Sample dozen (4x5 paper, with developer, 20 cents. Write today for fuller information.

M. K. Turner, 102 N. Pryor st., Atlanta, Ga

W. M. Gerrish, R. F. D., Epping, N. H., keeps a complete supply of our goods, and Eastern customers will save freight by ordering of him.

The W. F. Falconer Mfg. Co.

SEND US the names and addresses of 20 of your friends and 5 one-cent stamps to help pay postage and receive a 12 months' trial subscription to THIS AND THAT. Address the publisher,

T. FORTSON PRUETT,
Sidney, N. Y.

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A vest pocket Map of your State.

New issue. These maps show all the Counties, in seven colors, all railroads, postoffices — and many towns not given in the postal guide —rivers, lakes and mountains, with index and population of counties, cities and towns. Census—it gives all official returns. We will send you postpaid any state map you wish for

20 cents (silver).

JOHN W. HANN,
Wauneta, Neb.

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The leading Agricultural Journal of the South.

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How does this strike you?

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is the only general daily newspaper published in a city of 2601 inhabitants. Its various features make it a welcomed visitor to every home in South Omaha, and to hundreds of farmers and stock shippers in Nebraska, Iowa, South Dakota, Kansas, Colorado, and other cattle- and hog-raising states.

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SOUTH OMAHA, NEB.

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S. H. RICHMOND,
Real Estate.

Agent Land Department,
Florida East Coast Railway,
Perrine Grant.

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The subscription price of the ROCKY MOUNTAIN BEE JOURNAL is 50 cents. We will send it with THE BEE-KEEPER one year for only 75 cents.

AGENTS Wanted in every town for our **Washing Machines.**

You can double your money every time you sell one and they sell easily. We have sold over 150,000 in the last fourteen years. They are cheaper than ever. Catalogue Free.

THE EMPIRE WASHER CO., Jamestown, N.Y.

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The Iowa Horticultural Paper.

Monthly, 50 cents per year.

It is unique, planned on original lines.

You cannot be up-to-date in fruit growing unless you read it.

Balance of this year free to new subscribers.

THE FRUITMAN,
Mt. Vernon, Iowa.

8tf

R·I·P·A·N·S

I doctored for a year and a half for what the doctor told me was gall stones. I had read so much about the relief Ripans Tabules gave other people I thought I would get some. I have used eight of the 5-cent boxes and have not had a spell since.

At druggists.

The Five-Cent packet is enough for an ordinary occasion. The family bottle, 60 cents, contains a supply for a year.

The Nebraska Farm Journal

A monthly journal devoted to agricultural interests. Largest circulation of any agricultural paper in the west. It circulates in Missouri, Kansas, Nebraska, Iowa and Colorado.

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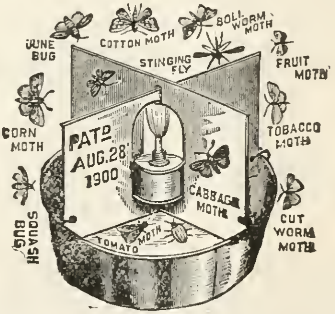

THE NEW **Moth Catcher** is a splendid success. Spraying and all other devices have proven more or less a failure, but this "trap" destroys the moth before any eggs are laid. It catches the **Coddling Moth, Borer Fly, Stinging Fly, Peach and Plum Beetle, Cabbage Moth, Tobacco Moth, Cotton Moth, Bee Moth**—also the destroyers of cucumbers, squashes, tomatoes, etc. Makes your fruit and vegetables plump, sound, wholesome and marketable, besides increasing the yield. Only **one-sixth** the cost of spraying and does its work at night. No stock destroyed, or trees killed. **Simple, cheap, durable.** Easily attended and **PERFECT in execution.** Two sizes: small size, 10x14 in., 85c, by mail, $1.00; per dozen, $8.50—Large size, 14x20 in. $1.00, by mail $1.30, per dozen, $10.00. Send for circulars and free sample copy of the Central Farmer giving full description of the Moth Catcher. **Agents Wanted Everywhere** for the Best seller of the season. **New Device.** Sells at sight. Everybody wants it. A money-maker for agents.

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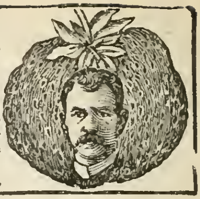

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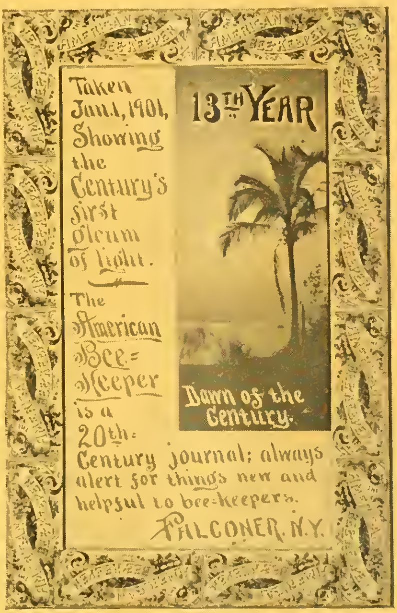

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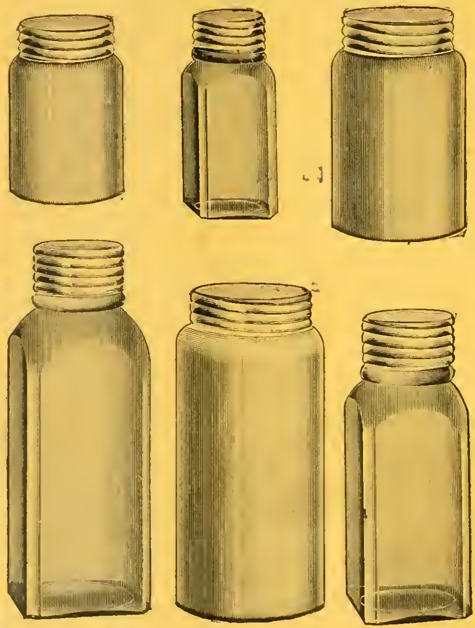

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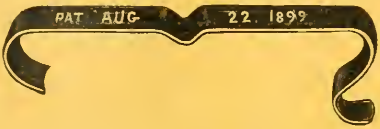
2	lb. round Her. jars, doz.,	1.10	12.00	per gr.



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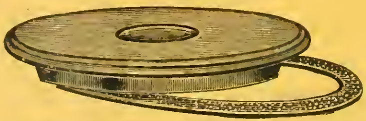

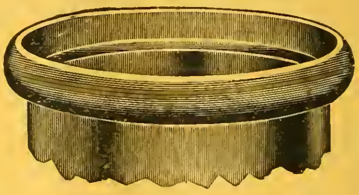

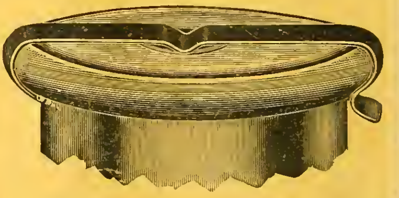

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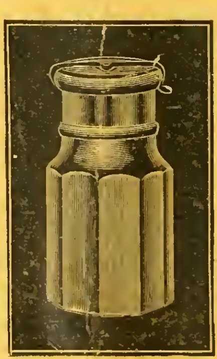

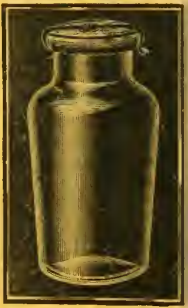

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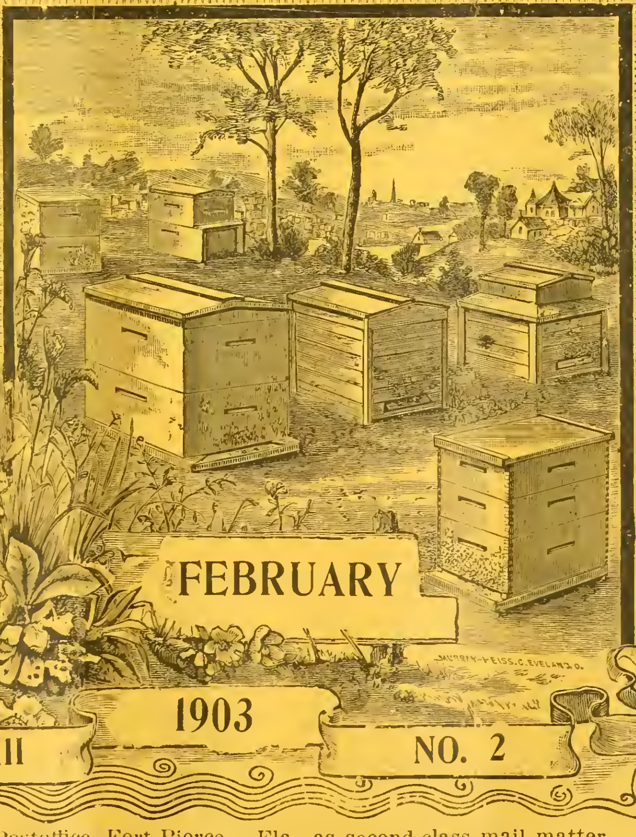
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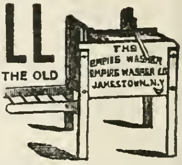

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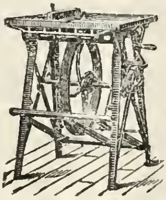

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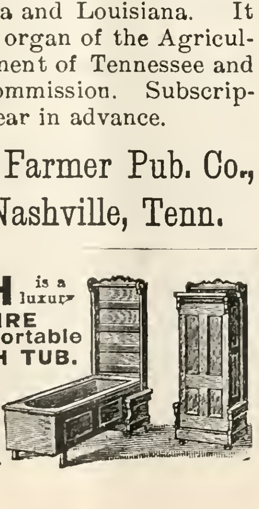

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THE AMERICAN BEE-KEEPER

Published Monthly by The W. T. Falconer Mfg. Co.

Vol. XIII FEBRUARY, 1903 No. 2

BEE=HIVES.

The Merits and Disadvantages of Modern Types Discussed.

(Arthur C. Miller).

IT Was Mr. Hutchinson, I think, who said that in the line of hives and implements we have gone about as far as we can; that from now on we must look to co-operation and organization to improve our condition. He used the Heddon hive, but could succeed with "any old thing." So far as it goes, the Heddon hive is good and embodies many excellent features, but it is by no means near enough perfect to warrant the belief by Mr. Hutchinson that no improvement can be looked for. The cry of "perfection" is as old as man, but still each successive generation sees the old ways and implements supplanted by new.

It is the purpose of this article to point out some of the shortcomings of types of hives now in use—and later possibly of some other instruments—hoping thereby to stimulate effort to overcome such evils, to the end that better hives may be evolved. I shall not assail any hive, but shall allude only to principles involved. Before going further let me say it should be borne in mind that no one style of hive is adapted to all climates and all systems.

The essentials of a hive are simplicity, durability, adaptability to a maximum number of systems of management, and low cost. A rectangular box, loose hanging frames, flat bottom and top is doubtless the most simple form of movable comb hive, but its simplicity is secured at a cost of several essential features. The frames swing loose with all the evils that implies. When storified, the bees connect the two sets of frames, and attempts to move the upper disturbs the lower, and trouble ensues. Spacing between combs is not constant. To overcome part of the trouble the closed end or "self-spacing" frames were devised. It was an advance, but with them came other evils. Unless the frames were pressed together the bees would work propolis between them until it was difficult to get frames back into a hive once they were removed. It also hindered ready manipulation. Without compression much the same trouble was met in storifying as with unspaced frames. Again, with or without compression, it was found best to use a "follower" to keep the bees out of the spare space necessary in such hives. Such followers either swell fast or are glued fast and by many bee-keepers are well considered an abomination and a needless expense.

The next step was so to fit frames to hives as to prevent bees getting behind the frames to glue them (Heddon and Danzenbaker types), but in many climates the wood of both frames and hives were so swollen that it is impossible to remove the frames. Again, the hive-sides and ends swell so that the space below hanging frames and above standing frames is increased to such an extent that when storified the "bee space" is much too great, or in exceedingly dry climates the other extreme occurs, and the bee-space is too small. So much for boxes with frames in them.

Mr. Quinby devised a standing-frame hive, a modification of the Huber "leaf hive," putting hooks on the corners of the frames so that when properly placed on the bottom-board hey would remain erect. This hive had several vital defects. The bottom-board was complicated, the hook arrangement awkard, the hive could not be readily storified and the block of frames comprising a "hive" could not be readily or safely handled without the bottom. Mr. Bingham devised a shallow standing-frame hive, the "frames" having no bottom bar. Being pretty securely clamped together a set of frames can be handled without the bottom-board, and they can be storified. But the lack of a bottom bar is a serious fault in the eyes of many. Also in order to get a simple bottom-board Mr. B. places his frames side to the entrance instead of end to it, a practice pretty universally objected to by bee-keepers. It certainly has some disadvantages, but is not vital. The hive is a long step forward, its shallowness and storifying giving it many of the virtues of the Heddon, while avoiding the evils of that hive, but it must be handled more carefully. It would never do to try to "jounce" it a la Rambler. The "panels" used to close the sides of such hives are troublesome. When properly constructed they are more expensive than is desirable. One other, and a great trouble with such hives, is the liability of the frames tumbling over onto the ground like a row of bricks, when the compression is released, and manipulation is in progress. A few such experiences is generally enough to convince the experimenter that he does not want them. But they have come to stay.

So much for the broad chamber. Supers and covers are next consideration. Bottoms are about as simple as they can be, and either of several now on the market embody excellent features. Possibly they might advantageously be made of more durable wood even if at slightly increased cost, and certainly thicker and stronger bottoms than some now sold would be better.

Of covers there are none yet on the market that come anywhere near perfection. They twist, they crack, they shrink, they swell, they are clumsy or complicated to make, and a dozen other evils, and ofttimes one almost believes each style is worse than the other. There is a large field here for some budding genius.

In the construction of supers, the great desideratum is keeping the section clean. It is also essential that they be kept square, may be readily inserted and as readily removed. With the majority of cases on the market, the sections separators, wedges, &c., swell so that it is often impossible to remove the sections at all unless the side of the super is first pried partly off. Frames and section holders only aggravate the trouble.

Some bee-keepers want to move outer rows of sections to the centre, and vice versa; some want everything firm and rigid; some want separators, others do not. On scarcely any part of bee-keeping do we differ more than in our likes and dislikes in "supers." After trying all or nearly all styles and observing the tendency of the "craft," I am inclined to believe that the "section holder" without top-bar, and either with loose or fastened separators will be the leading and most satisfactory all-around super. Also I believe that they will be used clamped together somewhat after the manner of Mr. Bingham's frames, and will be used independently of an outer case, though perhaps protected by one. I think some arangement similar to Mr. Bingham's cover with canvas drop—"petticoats." Rambler called them—will be found most satisfactory for protection of supers.

Providence, R. I., Dec. 16, 1902.

"Success to The American Bee-Keeper. It is improving fast."—L. F. Hanegan.

The Canadian bee-keepers have fallen into line, in the mater of honey exchanges; having organized and proceeded to execute plans for future operations.

Of the 91 apiaries visited in Ontario, by Inspector McEvoy, during the past year, foul brood was found to exist in 30 of them.

QUEEN-REARING.

Another Method Described—The Present Controversy as Seen by One of Our Staff.

(C. S. Harris.)

THE queen-rearing subject has occupied considerable space of late in many of the bee periodicals but has not been so generally discussed by the actual main body of queen-breeders as might have been expected. Possibly some have been deterred from writing by a distaste for the appearance of free advertising; and others by the opinion that the subject was one of little interest or benefit to the ordinary bee-keeper and, besides, had assumed the very unpleasant aspect of personal attack. No doubt many have been so busy rearing what Dr. Gallup styles worthless queens, that they have not found time to enter the arena.

Mr. Doolittle says these controversies are productive of much less good than plain statements of facts and experiences, and I have no doubt he is correct, and yet, if the bitter, personal feeling could be excluded, much might be learned by a comparison of several prevailing methods. It is impossible, and unnecessary, for all to work alike to arrive at one and the same high point. After trying the various plans, my preference is for the Doolittle, with some variations of my own.

I believe that good and bad queens may be reared by any or all the methods in use, depending partly upon conditions over which we have little or no control and largely upon the care exercised by the queen-breeder himself. The Doolittle plan of transferring the larvae may, possibly, admit in careless hands, of more latitude for error than the Alley plan of using eggs, but there is no place in queen-rearing for the careless man and he cannot long remain there.

My manner of work differs mainly in the use of two queens in cell colonies, and while this, perhaps, has been tried and rejected by many, there may be some who, like myself, will find an advantage in it, and for the benefit of those I will describe it.

I use the ten-frame simplicity and dove-tailed hives, which admit of a tight-fitting, half-inch division board, with four frames and a Doolittle feeder on either side. I place a super, or hive-body, so arranged over a strong colony, using two queen excluders between it and the brood nest below, which, while allowing the bees to mingle, prevents the queens of the colony and the queen above (for I have a queen in one side of this super) from coming in contact. As conditions warrant it, additional supers of empty combs can be placed under the super prepared for cells and the queen-excluders shifted, if thought best, to give the lower queen more room.

A flight hole is provided at the rear of each compartment of the divided super, and these holes may be closed by a cork, a wooden button, or a piece of queen-excluding metal, as desired. The bees are allowed to fly from the side containing the queen, the other hole being closed with queen-excluder while in use for cells. If closed, it is necessary to see that some of the combs within contain pollen at all times when cells are being built.

This plan gives me very strong colonies and brood is always at hand for the cell compartment, as all that is necessary is to exchange combs of honey, or empty combs, for brood from the compartment having the queen, making sure, of course, that she is left at home.

I use two combs of brood and two frames prepared for cell sticks which, with the feeder, fills the compartment. If honey is not coming in freely, I feed syrup enough to keep them at the comb building point. It is not necessary to feed where the queen is, as the bees are stimulated by the feed from the other side, and I use here either a plain division board, or "dummy" frame, or a fifth comb. This is a good place to retain choice drones in a poor season, or they may be placed in the full colony below. If you wish, the queen can be transferred, on a comb of brood, to the cell compartment and cells started on the side from which she was removed, and these bees, with the strength of a full colony, will accept and build cells as if completely queenless. Although the plan as ordinarily used is that of supercedure, and it is my belief that queens from supercedure cells average better than those from swarming cells. A greater number of cells can be obtained in other ways, but except with a colony particularly good at cell building, I think it can be overdone and quality sacrificed for the sake of quantity. By this plan a strong force of bees is engaged upon not more than a dozen or fifteen cells at one time, as the second stick of cells is not given until the first is sealed. I quite frequently have queens live to four and even five years of age, but I do not consider longevity of such prime importance and would prefer to re-queen each season, retaining only such queens as I desired to further test for use as breeders.

I scarcely know what to think of Dr. Gallup's attack. Certainly his "missing link" is found in dipped as well as natural cells, the attachment evidently being made by the larva itself, as a means of support in the cell, and probably for no other purpose. His wholesale condemnation of queens and methods is an evidence of the weakness of his charge.

Mr. Alley's lately-put-forth claim that the best queens are only produced by queenless bees is certainly not in accord with nature's usual ways and, if true, it seems strange indeed that the Creator passed it by for the inferior plans of supercedure and swarming to continue the species.

Holly Hill, Fla., Dec. 3, 1902.

"I like your American Bee-Keeper very much."
—Dr. O. M. Blanton.

Selling Extracted Honey at Retail.

(W. W. McNeal.)

THIS is a seasonable subject, and as interest in it seems to be awakening I would like to twitter a small twit.

I was much pleased with Mr. Aiken's article in The Bee-Keeper. In my opinion that matter of selling liquid honey has never received the attention its importance demands. As the years go by we see unmistakable evidence that the extracted honey is growing in favor among producers. This is due largely to the fact that there is more certainty of a crop in this form than when working for comb honey. The floral conditions are changing for the worse in many places thus making the production of extracted honey almost a necessity. But bee-keepers are not laboring as they should to create a market for these goods. The very best grades of liquid honey may, however, not compare favorably with the ready sales of a gilt-edge article of comb honey in certain circles, though there is much room for improvement in a general way. The ornamental effects of the latter exceed those of the former. Moreover, we are told that the flavor of newly-made comb lends a charm to the eating qualities of honey that can never be realized in any other way. Be this as it may, a strictly fancy grade of comb honey is a luxury in the majority of homes, and, being a luxury, will be used sparingly; hence there is left to the producers and dealers in extracted honey larger possibilities, by a right handling of his goods, notwithstanding the increased competition of glucosed syrups and those of fine commercial sugar for table use.

Mr. Aiken's idea of a cheap package for honey is all right, if one is to deal directly with the consumer. For a house to house canvass, a paper bag, a bucket, in fact most anything will do—anything holding more than a pound. With his delicious alfalfa honey and dry climate I can see how his paper bags would work admirably. But where else can one find honey that will candy so obligingly and climatic conditions correspondingly favorable? For a direct service from the producers to the consumer the package never plays the important part it does when honey is sold through the grocery stores. Your customer is not compelled to rely so much on the looks of the article as seen through a package, but he assures himeslf of the honesty of the goods by the form of the purchase. He will buy a three or five pound jar in preference to a one pound jar; which to my way of thinking, or in other words, to my surroundings, is a more practical way out of the difficulty. For while the cost of the larger package will lower the cost price to the consumer, it does not lesson the retail price to the producer.

Neither does it detract from the appearance of the article to be sold, but rather is enhanced in looks for the display of water-white honey in a five pound glass jar is better than the same grade in a one pound jar. I sympathize with Mr. Aiken in the fact that it is the middle classes who are the real consumers of honey and any reduction in the cost of package means increased sales of honey through this channel of trade.

When selling honey through the medium of the grocery stores, the half-pound glass packages hold unbounded sway. These same lovers of honey who would buy the larger packages when brought to their own door will here show a preference for the smaller ones, buying often and paying the higher price. If Mr. Aiken were to bring or send his paper buckets over into these regions and distribute them about to await the poor man's call for honey, I fear that he should find some difficulty in getting them disposed of in time for the succeeding crop. Yes, I make the venture that they would grace the shelves of those houses till so many generations of bees came and went that he would find himself lost in the count. The old adage that it is a poor rule to buy a cat in the bag seems to be well impressed on the mind of the intending purchaser of honey, whoever he may be, and he will not buy it in a bag without consuming valuable time trying to discover if it is not merely a "doctored" article of granulated sugar. If granulated honey could be sold in the eastern markets at the price of cane or beet sugar then this, together with the inferior flavor of honey, might so lessen the amount or parleying over the purity of the article as to make friend Aiken's rule for selling honey a pleasant and practical possibility.

Wheelersburg, Ohio, Dec. 5, 1902.

"*The American Bee-Keeper is a welcome visitor.*"—*James Heddon.*

The Worcester, Mass., Bee-Keepers' Association held a very successful meeting, Jan. 24th, notice of which reaches us, just as we close the forms, Jan. 30th, from Secretary C. R. Russel.

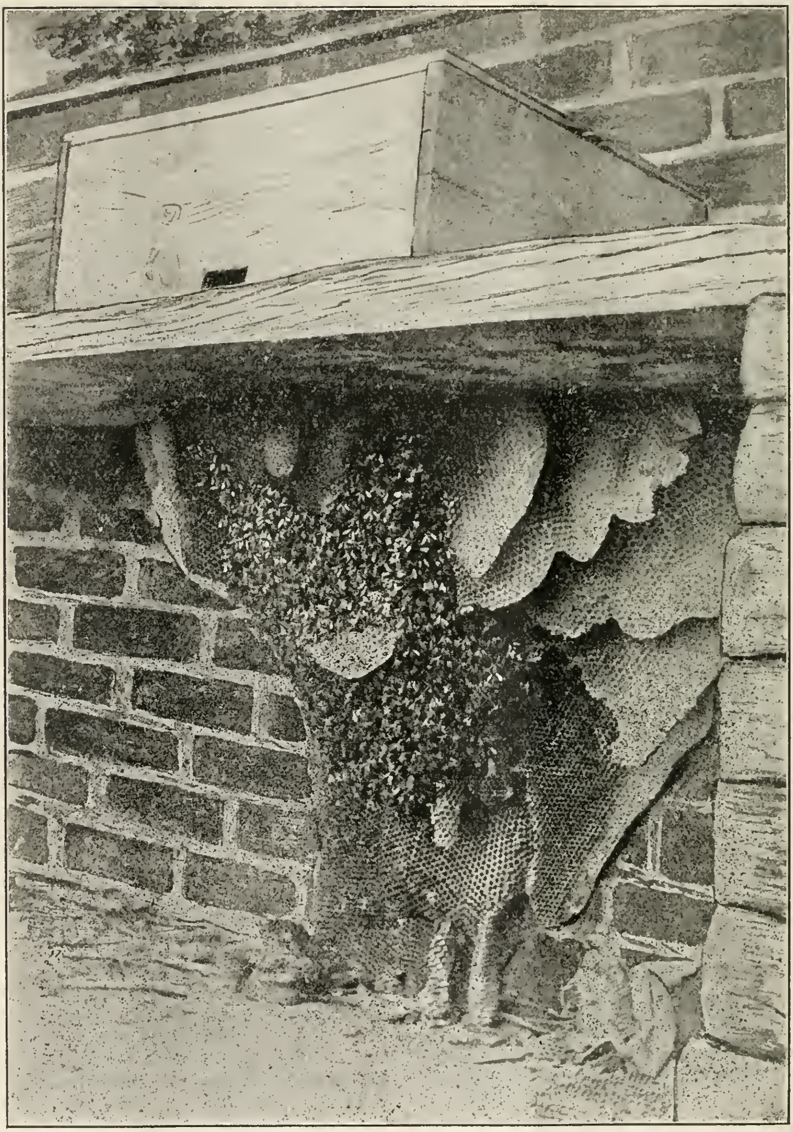
DEEP AND WIDE TOP-BARS VS. HONEY-BOARDS.

Something of Their History and Relative Merits.
From an Experienced Apiarist.

(James Heddon.)

DEAR BROTHER HILL: As you are aware, my experience in bee-keeping dates back thirty-three years, and it was during the first two years that I began experimenting with honey-boards. About this time Mr. R. C. Otis owner of the Langstroth patent for Michigan and adjoining states, visited me, exhibiting a thick, bungling honey-board, covering the entire top of the hive and containing three slots crosswise.

Soon after this, I adopted small three pound honey boxes, with two glass sides, each having one slot in the bottom. Finding the bees did not finish the outside capping of the combs well, I corrected this by adding two more slots or passage-ways through which the bees entered the boxes; this left the bottoms of the little boxes practically composed of slats. Next, I made a honey-board containing passage-ways to correspond with the bottom of these boxes. That worked very well but was quite sticky with glue. To avoid this, I made a three-eigth rise all around the sides and twice across the middle, lifting my little boxes up bee-space, and this worked much better. Next, I wondered why the top-bars of the brood frames could not be made to serve as a honey board, and right here I experimented largely with deep and wide top bars. I made them different widths, up to 1 1-8 inches (which would leave 1-4 inch space between them) and various depths from 1-2 inch to 1 1-8 inches. Now, it is a fact that deep, wide top-bars tend to prevent the building of brace-combs between the tops of these bars and the bottom of the surplus receptacles, but in the matter of brace-combs between the sides of the top-bars, making them almost immovable laterally; such top-bars are something villainous, and so I again turned attention to the honey-board, and soon developed the slatted board possessing bee-space and brake-joint principles, that is, the center of each



COMB-BUILDING IN THE OPEN. *See page* 36 slat in the honey-board comes directly over the space between the top-bars and this prevented the building of brace-combs anywhere above the honey board, while at the same time admitting freely the heat and odor of the brood-chamber, as well as the bees themselves.

Next came the queen-excluding metal, invented by Father Langstroth, I guess, but pushed prominently to the front by D. A. Jones and others of Canada. This metal added to my honey-board by sliding strips into saw cuts in the edges of the slats, and a perfect honey-board resulted, and how any one can be content to handle bees without this honey-board is more than I can conceive. That it does not have the least tendency to dissuade bees from entering the surplus receptacles just as soon as there is any surplus honey, is something that I know from repeated demonstration. I have placed honey boards on one hive, jogged side-ways to make all brake-joints with each other, and had the bees enter the surplus receptacles just as readily as where no honey-board was used. One season in one apiary of eighty colonies, I used honey-boards on about half, and the others without any, and there was no difference perceptible in the quick and successful working of the bees. I am confident that no kind of top-bars can ever take the place of the honey-board where the latter is properly made and manipulated, and I am astonished that such a question should remain under discussion at this late date.

I wish you would say in your journal (a monthly visitor I prize very much) that the patent on my hive expired last September and so all are free to make and use it. I furthermore wish other journals would copy.

Dowagiac, Mich., Dec. 31, 1892.

"*The American Bee-Keeper has improved wonderfully during the last year.*"—*J. B. Hall.*

To die without having won a friend—a true and loved heart comrade—is to die a failure. No amount of fame or wealth or power can make up for this lack. To be without a friend is to be without the seal of highest success.

THE NATIONAL ASSOCIATION.

Propositions of a New York Member as to Means Whereby Its Greater Usefulness May Be Effected.

(Frederick B. Simpson.)

IN the first place, the name of this association should be a guide as to who should conduct it. Probably the quickest way to realize what might be, is to imagine a board of directors and all officers, chosen solely from among those members who are bee-keepers in the largest and broadest sense of the word, that is, specialists whose main or entire business consists of the keeping of bees, during the time they are holding office.

With such a body there would be no doubt of quick action in the matter of co-operation, as the interests of all would be similar and directly so; and such a board could pass on many questions from local boards, that could not be passed on by any board consisting in the majority of men who make their living by selling something to the bee-keeper; or who sell his products on commission.

Suppose, in the recent antagonisms, no man who could take advantage of the second-class pound rate of postage, had been in a position of candidacy or office; but that all editors had maintained a position of total equality towards all members acting as editors only. Then if the board of directors had published a verbatim report of all their proceedings and had further investigated all claims to the utmost, giving all facts to the membership with some promptness, the membership would be in a position to act intelligently.

The report of the annual convention should also be in the hands of all members before an election, so that they might be able to judge in what manner the meeting was conducted, and also that they would have a permanent record of what was accomplished. With bee-keepers only as officers, there would be a greater incentive for local associations to send representatives, and there would still be a large enough number of commission men and supply dealers and editors there in their own interests to keep things moving in their lines.

A complete list of members with their names and addresses should be supplied to all members at frequent intervals as the association should encourage correspondence.

All proceedings of the board of directors and of the annual convention should be reported verbatim and promptly published in permanent form. It is well that the association has hitherto been assisted by some men of activity who have secured reports where there would have otherwise been no report taken. But the association should be based on a sufficiently solid foundation so that there would be thorough independence and no need of philanthropy. There are a number of matters on which the membership should vote individually instead of leaving them to the board of directors, particularly the publishing of proceedings.

I have above outlined what I believe might be possible if none but bee-keepers held office. It might be argued that others might do better work, but I am sure if men whose chief interest is directly in the production of honey, found that they were not sufficiently up on parliamentary practice or anything else necessary for the exercise of official duties, they would very likely be anxious to delegate such matters to committees chosen with special reference to their fitness. If, however, such a board of directors should fall far short of doing as well as some whom I have heard of, I will miss my guess.

Finally, I do not believe we will ever have any restriction as to who shall hold office, but that every member is equally entitled to nomination; but I think by a larger, broader, less small, standard upon which to base all the association's doings we will get a large enough membership to make the association national in fact as well as in name.

In my opinion all who had anything to do with printing Mr. France's name on the official ballot, should be expelled from the association.

Most of us have some individual axe to grind and it is well that we have, but the axe of the specialist bee-keeper is the production of honey in most cases, and our officers should be those who are actually doing some extensive grinding in that line. At the same time we should avoid having on the board a majority of men who are grinding another axe and all grinding it together.

Cuba, N. Y., Jan. 9, 1903.

"The American Bee-Keeper has been everything to me."—P. A. Birch.

Notes from Idaho.

WIRE FRAMES.

(E. F. Atwater.)

MUCH useless wiring is being done, says Gleanings. True. More than two horizontal wires is a useless expense. Two wires give best results, and I owe the idea to Harry Howe. Now, don't be skeptical; try it. For our part we will never go back to the old plan of using three or four horizontal wires to the L. frame. Editor Root and Dr. Miller have been having a lively "set-to" about brood coming to the top bars of the L. frame. Dr. Miller's frames are filled with combs built from full sheets of foundation staid with splints; no sagging there; so brood is much more likely to extend to the top bars. Root's combs are built from foundation staid with horizontal wires, consequently sagging all along the top bars, and bees dislike to rear brood in cells ever so slightly elongated, consequently, an inch or so of honey along the top bars. Mr. Yoder, of Mampa, Ida., an apiarist of many years experience suggested this to me and I am satisfied of its truth, though there are exceptions to this rule.

GOOD QUEENS WITH CELL CUPS

Alley and his armed knight (A. C. M.) may hammer away forever on the inferiority of the cell-cup plan of queen-rearing, but they cannot alter the fact that queens properly reared by the cell-cup plan are as good as any that can be reared. Come, you combative Deacon Hardscrabble, join me in "The cell-cup plan forever."

"The tobacco smoke method," etc. Yes, sir, that plan of introducing queens is all right, where one can be around at the proper time, (evening). For this reason it is seldom that we can use it at our out-yards.

GRASS FOR CONFINING BEES

In grouping my hives, ready for the temporary sheds (the way we winter our bees in Western Idaho) all known plans were tried to make the bees adhere to their new location, but results were unsatisfactory until we hit on the plan of stuffing the entrance full of grass. Next morning when the bees find themselves shut in, there is great excitement until they work their way out, and few bees return to the old stand. We believe that this principle is of great value where bees are to be moved a short distance.

DEFECTIVE SMOKERS.

Yes, Deacon H., you are right about the "Buncombe Brass Smoker." I had one come by mail; the springy brass came apart at the joints, and the tin back came off enroute. After spending "two bits" for a new back and several rivets in the weak places it looked nice, but the stove was fastened to the bellows with a bit of baling wire which soon parted. The old and useless thing is laying around the back yard, and I am using a real smoker with substantial iron legs between bellows and stove.

Boise, Ida., Oct. 17, 1902.

"*The sample of The American Bee-Keeper is equal to some for which I pay a dollar.*"—*A. A. Lyon.*

INSECTS AND PLANT DISEASES

At the Universal Exposition of St. Louis, 1904.

UNDER the classification of Useful Insects and Their Products, Injurious Insects and Plant Diseases, there will be installed in the Agriculture Palace of the Universal Exposition of St. Louis, 1904, displays as follows:

USEFUL INSECTS AND THEIR PRODUCTS. INJURIOUS INSECTS AND PLANT DISEASES.

Systematic collections of useful and injurious insects. Bees. Silkworms and other bombycids. Cochineal insects.

Systematic collections of vegetable parasites of plants and animals.

Appliances for rearing and keeping bees and silk worms. Their products, honey, wax, cocoons.

Appliances and processes for destroying plant diseases and injurious insects.

SPACE AND POWER FREE OF CHARGE.

There will be no charge for space occupied by exhibits, and a limited amount of power for the operation of mechanical devices to illustrate processes of special interest will be furnished to exhibitors without charge.

"*The American Bee-Keeper is the best paper published, for the beginner, in my opinion.*'—*Jas. Godfrey.*

OUR
CORRESPONDENTS

Romulus, N. Y., Jan. 6, 1903.

Editor American Bee-Keeper:

A series of Bee-Keepers' Institutes will be held in this state as follows:

Canandaigua, March 2-3.
Romulus, March 4.
Auburn, March 5.
Cortland, March 6.
Fulton, March 7.
Syracuse, March 9-10.
Amsterdam, March 11.

Prof. Frank Benton, of Washington, D. C., who is furnished by the U. S. Department of Agriculture at the expense of the Bureau of Institutes of the State Department of Agriculture, will address the meetings.

The New York State Association of Bee-Keepers' Societies will hold its annual meeting at Syracuse March 10, at 10 o'clock a. m., in the city hall. Prof. Benton and other prominent bee-men have informed us of their intention to attend this meeting, and a profitable and interesting session is in store for those who attend.

Special rates have been secured for entertainment at the Manhattan hotel, Fayette St., at $1.25 per day.

C. B. Howard, Sec.,
Romulus, N. Y.

THE CARNIOLAN-ITALIAN CROSS.

Pulaski, N. Y., Nov. 17, 1902.

Editor Bee-Keeper:

As some of the readers of The Bee-Keeper are anxious to learn what kind of a bee results from a cross between the Carniolan and Italian, I herewith present my experience:

I have crossed them for several years, and with me the cross is a better bee than either race in its purity. The most satisfactory results have been from the use of a Carniolan queen—the drone being Italian. In most cases this gives me a bee that sticks right to business in a honey flow, and also a prolific queen. They are not trying constantly to swarm, and are quite as gentle as either of the races from which the cross originates, and are beautiful bees, as well.

I have kept Carniolans for many years, and with the exception of their two bad traits—excessive swarming and excessive brood rearing after the close of the honey flow—I find them superior to the Italians in every way. The use of the Carniolan queen with Italian drone, has given me the bee best suited to myself, and I have no doubt the experience of my brother bee-keepers would be the same. The colonies which gave me the most honey this year were all bred in this way, and I am well pleased with their actions, Best of all, they did not offer to swarm, but kept right at work, storing honey. It is my firm belief that the more Carniolan blood one can get into them, without retaining the disposition for excessive late breeding, the better bee he will have. I have the "red clover" strains of Italians, but they do not work as well on red clover as my Carniolans do. Though I have never measured their tongues, I believe they can reach farther than the Italians.

It should not be understood that all crosses of this kind are as satisfactory as those mentioned above, for about 33 per cent. proved to be determined swarmers. However, as the majority suited me "to a T," I took about 20 young Carniolan queens, reared from imported mothers, to my Italian yard, and all were successfully mated. These I am now wintering with expectations of good results next season.

Several queens of this cross were sent as "mismated" to my customers, and several of them have written that they were better pleased with them than with any bees they ever had.

Brother bee-keepers, let us join hands in perfecting this grand cross, and thereby secure a bee that will be the pride of the American bee-keeper.

Wishing you all success, I remain,
Yours truly,
L. H. Perry.

Madison, Me., Jan. 7, 1903.

Editor Bee-Keeper:

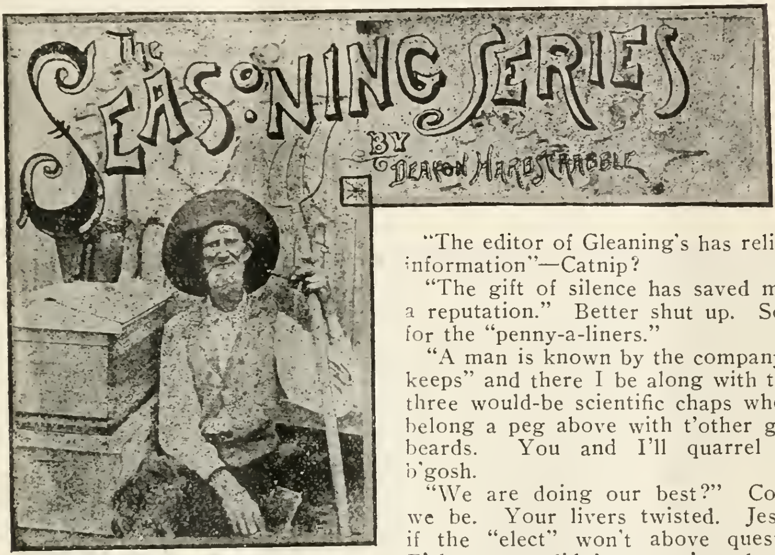
In a recent issue I noticed an item which read something like this: "It is not known whether a queen is killed by stinging or suffocation."

Now while I am not very well acquainted with the anatomy of the bee, it is reasonable to suppose that there is not very much difference in the suffocating qualities of the queen and the drone, and the drone will not suffocate when completely immersed in water for fifteen minutes, and I have not found out how much longer. The first trap-full of drones I submerged until all were quiet, then I emptied them out. The next day the drones were as thick as ever. I recaptured them, kept them under water fifteen minutes and set them aside to "dry." About nine out of ten revived and were as lively as ever. Try it. I shall keep them 20 minutes next time.

In regard to cedar bark for smoker fuel as recommended by J. H. Wing, would say: In my opinion, it is poor "stuff." I used it one year and my bees nearly all died. I attributed it to the oil of cedar causing the queens to abort. Without joking, I would not use cedar bark if I could get anything else. Did J. H. Wing ever use cedar bark for smoker fuel to any extent?

The "Deacon" may object to our using the word "abort" but it is a short word and comes nearer expressing what I want to say than any other at my immediate command. But rub it on lightly, deacon, as I am only an amateur, and enclose 50 cents for another year's subscription.

Yours truly,
W. G. Sawyer, M. D.



Dear Bro. Hill:

"There do always be room at the top" 'cepting o' the National where by thunder a sight more is needed. A resign or kick out o' the whole blamed "push" or "pull," then a kept out would clear the atmosphere. "Were a long time dead"—not, "dead a long time" tell Ernest—and b'gosh let's have suthin' good while we be a livin', That ere "official ballot" stunk to high heaven and a parent do be judged by his offspring.

Fust thing you know you'll get disloved. Crazy to say there be folkses as writes regular to the papers machine-made articles at cents a word. They'll swat ye sure. 'Spose they do be "penny-a-liners" its no reason for spilin' their green-goods biz. You uns is gettin' keerless.

D'ye imagine we're bloated bondholders? The idee o' thinkin' we can afford butter and honey together on the same piece of bread. Course it's good.

"The editor of Gleaning's has reliable information"—Catnip?

"The gift of silence has saved many a reputation." Better shut up. Sorry for the "penny-a-liners."

"A man is known by the company he keeps" and there I be along with them three would-be scientific chaps when I belong a peg above with t'other graybeards. You and I'll quarrel yet, b'gosh.

"We are doing our best?" Course we be. Your livers twisted. Jest as if the "elect" won't above question. P'rhaps you didn't mean 'em, but we uns. Lookee here and recollect my sayin's. Apiaryanism is perfect, the vetrans hath said it and that they done it and b'gosh they aughter know better'n a chicken like you or a ancient like me.

Powerful mean cuss that Baron Liewful, went and give away the umbillycuss secret now Borodino Boy is huntin' scuses. Nary a chap tumbled to Bro. 'Lisha's dry wit, the kind "made in California." 'Twas sich food for fishes and Jerusalem how the suckers bit. "I found the umbillycuss a ramyfying all through the royal jelly and my queens is away beyond." Oh say, Harry, do choke off Bro. Gallup afore he undos any more of the saints.

"Funny wasn't it? Made me laugh,—
He's too modest, he is by half,
Made me laugh as though I sh'd split—

* * *

Fellah's keep sayin'—well now that's nice
'Did it once but cahn' do it twice,'—
Don' you b'lieve the'z no more fat,
Lots in the kitchen 'z good 'z that

Know he'll try 'n' guess he'll win
Here she goes for hit him ag'in."

Arter all guess best let 'Lish' rip along. It's royal fun for 'em as aint blind in their own conceits.

"Von Humbug is the man wot owns all these ere shows,
And if you'll give him half a chance he'll tell you more'n he knows."

John Hardscrabble.

THE
Bee-Keeping World

AUSTRIA.

E. L. Gatter was probably the original inventor of the drone trap having constructed one in 1860. The honey extractor received his attention in 1870, a comb-basket was added making it possible and practicable to reverse the combs without removing from the extractor.

In speaking of the honey producing plant phacelia, Mr. Bela Ambrozy says, the plant proved to be a great success with him; that he had planted about one acre in the spring of 1902 and that the larger part of his honey was the result of this planting. The little blossoms he says are visited by the bees from early till late; generally three or four blossoms would furnish enough honey for a bee-load. He estimates that from two to four acres, planted to phacelia, furnish sufficient forage for a large apiary. (Let the reader remember here that an apiary consisting of 20 colonies would be considered a large one in Austria). The harvesting of the phacelia, Ambrozy says, is attended with some difficulties. The plant ripens seed, and continues to bloom right along; the proper time to harvest the crop will have to be judiciously selected. The seed shells easily. The best time to cut, bind and set up the bundles is early in the morning, before the dew is off. Canvas-covered wagons are used to convey the crop to the barn. The curing takes two or three days. A phacelia association is talked of in Hungaria.

GERMANY.

To relieve the pain of a bee sting Grundig says strong salt brine rubbed into the wound is very beneficial.

A cement made of plaster Paris, thin glue and iron-filings answers well for repairing ant-eaten hives and bottom-boards, or to stop up any holes or cracks in hives. This cement is recommended in Deutsche Bzcht for smoothing motheaten frames.

Gerstung says, the bee-keepers of all other countries, but Germany, have adopted such hives as are accessible from the top only.

To preserve pollen filled combs: Sprinkle with pulverized salt or brine.—Illstr. Bztg.

The presence of formic acid in the honey is explained by Reidenbach by the discovered fact that all combs are more or less impregnated by this substance which is a necessary antiseptic to preserve the health of all bee colonies. On account of its volatile character it is all present in the hive, affects the food, the honey, the young bees and all.

It is not a very uncommon thing that colonies die of starvation with plenty of honey in the adjoining combs. If the bees had any recollection or knowledge that they had stored a supply of honey for their need in any part of the hive they could easily, and would, move over to that part and save their lives, says Dickel in Die Biene.

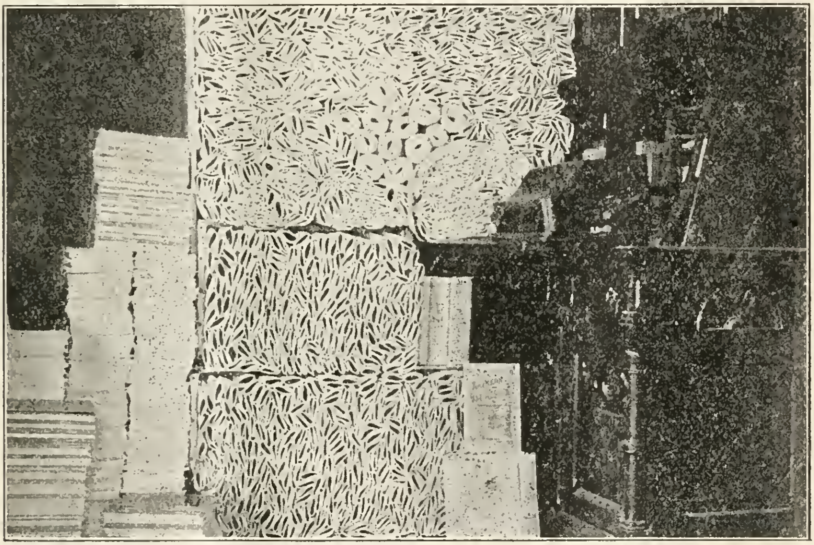
The use of honey for inducing sleep and quieting the nerves is a new thing. Wurth tells in Die Biene that one night, when unable to sleep, he arose from his bed and helped himself to some biscuit and honey. The effect was gratifying. Since then he has taken two or three tablespoonfuls of extracted honey at a dose frequently at night when restless and has always experienced the same result—sleep. Nervous people ought to make a note of this.

Whether the hive question in connection with the wintering problem is fully solved is doubtful at the least. Rev. Mr. Smith says on this point, in Deutsche Bzcht, As far as the bees are concerned it is immaterial whether their hives are of wood, straw or anything else, as long as the material used is a poor conductor of heat, it is immaterial whether a box-hive or a frame hive; this is a matter of convenience to the bee-keeper. It matters not where the entrance is located. The principal consideration is, the hive must be sufficiently roomy to allow the storing of an abundant supply over the cluster of bees. The thickness of the walls is of less importance, the broader and the deeper the hive is.

H. Petersen, the leader of the Central verein, died Nov. 14, 1902 in Schleswig-Holstein.

The Centralblatt says of him: From childhood up he associated with the bee; his spare time was given them. The success of the Centralverein was his aim and hobby. To advance the interests of this he neither spared time nor money. A powerful orator, he was great as an organizer of bee-keepers' societies. Modesty and unselfishness were traits of his character worthy of imitation. The bee-keepers will always honor his memory.

F. Greiner.



BEE-KEEPERS "TO SELL."

The engraving herewith presented will give our readers a glimpse of a corner of the editor's "sanctum" on publication day; showing over three thousand copies of The Bee-Keeper partly wrapped for mailing.

An autograph letter written by Charles Dickens has been presented to the public at Kingston-on-Thames.

THE AMERICAN BEE-KEEPER

PUBLISHED MONTHLY BY

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H. E. HILL, - EDITOR.

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Matters relating in any way to business should invariably be addressed to

THE AMERICAN BEE-KEEPER,
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Articles for publication or letters exclusively for the editorial department may be addressed to
H. E. Hill,
Fort Pierce, Fla.

Subscribers receiving their paper in blue wrapper will know that their subscription expires with this number. We hope that you will not delay favoring us with a renewal.

A red wrapper on your paper indicates that you owe for your subscription. Please give the matter your early attention.

Editorial

Mr. Jacob Alpaugh, the Canadian bee-keeper occasionally referred to in these columns of late, had the misfortune to lose all his 119 colonies of bees and entire apiarian equipment by fire, last month. They were packed for winter in a house in Ontario, and Mr. Alpaugh's Florida visit was cut short by the news of his loss. Our contemporary, Gleanings, has Mr. A. in Cuba, with A. I. Root; which we believe is an error, as he boarded a north-bound train at Fort Pierce, complaining of our hot weather.

As a ventilator, in moving bees, the portico screen appears to be growing in popularity. To obstruct the entrance with screen or block, in many instances, tends to confuse the bees, and this irritation in turn results in suffocation; while if the screen is placed some distance from the entrance, allowing the bees to pass freely in and out at the accustomed place, their actual confinement seems not to be taken so seriously, and quite general contentment follows. Our friend "Pat," used a frame made of half-inch stuff, three inches wide, against the front of the hive, in moving to Cuba. This was covered with screen, allowing the bees to crawl about the entrance and upon a portion of the end of the hive, which appeared to meet with their approval. Mr. Alpaugh, however, pronounces this device too small, using himself a four-inch box with wire-cloth side, against the front and the full size the end of the hive. In this, he says, the bees cluster as if upon the summer stands; and, even without top or bottom screens, carry safely upon long moves.

"Pat" writes, Jan. 8th, that he is doing business still at Cabanas, Cuba. He had at that date extracted about 200 gallons, and was very much of the opinion that the season in his locality would not prove to be a very good one for honey. He had been favored with a visit from Mr. W. W. Somerford, of Caimito, who has something like 1,400 colonies, and who had then taken out, approximately, 2,000 gallons; and he considered one-third of the flow past. Mr. P. had just begun increasing operations, by starting queen cells for 120 nuclei, and is filling in time by preparing for the return trip to the Florida coast in the spring. He has decided to make a change in the manner of preparing hives for the move. Says he, "If the best results are to be secured, it is necessary that the bees have ventilated room provided, not above, but below the frames. The hives which have permanent bottom-boards, will have the frames securely fastened, a two-inch rim with screen attached to top, and the hive inverted in transportation." He desires information in regard to the Ten Thousand Island or Caloosahatchee river country, on the west coast of Florida, for mangrove. We shall be pleased to receive any pointers that any reader may be able to give, upon this point.

Last month we promised our readers a series of articles to run through the present year, from the pens of able writers and upon live apiarian subjects. We invite particular attention to the contents of this number of the Bee-Keeper, as evidence of our good faith and a suggestion as to that which will follow. But one new subscriber from each of our present readers, would make possible several other improvements which we hopefully contemplate. Just now is an excellent time to mention the matter to your bee-keeping friends, as they could secure the volume complete.

The Idaho State Bee-Keepers' Association held a very successful meeting at Parma, Dec. 19 and 20, 1902, at which the following officers were elected: President, F. R. Fouch, Parma; vice-president, A. I. McClanahan, Fayette; general manager and treasurer, E. F. Atwater, Boise; secretary, Miss B. F. Peterson, Lower Boise. The Parma association met with the state society, in the Presbyterian church, and a basket dinner was an enjoyable feature of the occasion.

INTRODUCING VIRGIN QUEENS

During the active season in the apiary, it frequently occurs that the apiarist has on hand a virgin queen which he would like very much to substitute for some certain queen in the yard that is not deporting herself entirely to his satisfaction. However, to remove a laying queen and replace her with a virgin, is sure death to the latter. Of course, if the young queen can be permitted to run from the cell directly among the bees, she has a chance of life. But to introduce an older one, under the circumstances mentioned, is one of the difficult things that confront us all occasionally.

During his recent visit to the Bee-Keeper office, Mr. Alpaugh, of Canada, explained a method which he has used with unvarying successs for some time, as follows: The virgin to be introduced, is caged, with the reigning queen, over hatching brood, honey, etc., exactly as is practiced so generally, with the open-sided, square introducing cage, cut from a piece of wire-cloth. Mr. A. says the virgin will kill her old rival invariably, and that in forty-eight hours the cage may be removed with the assurance that the virgin is accepted. He attributes this result to the immediate contact of the two in combat, and the consequent odor derived in this way from the former mistress, by her successor, which is recognized by the bees, and seems satisfactory.

COMB HONEY IN FLORIDA.

A Wisconsin subscriber who contemplates locating in Florida, writes: "As I understand it, extracted honey, more than comb, is produced in Florida. If so, why?" Perhaps the chief reason is the fact that, owing to the humidity of our climate, it is very difficult to keep comb honey any length of time off of the hive as it will "weep," or sweat. Constant and expensive vigilance is also required to save comb honey from the ravages of the moth larvae, a very minute species of which abound. Its greater liability to damage in shipment to northern markets, is also against it, as well as the higher freight rate. The additional fact that much available surplus comes too slow for the production of first-class comb honey, probably has had its influence in diverting greater attention to the extracted product.

Another correspondent thinks it strange that comb honey may be taken in Cuba, if it is impracticable to do so in South Florida. It should be borne in mind that Cuba's surplus flow comes during the winter months—the dry season—while in this country we secure our surplus, or the greater portion of it, during the summer. The climates of Cuba and South Florida, in respect to seasons, are quite similar, but the nectar-yielding vegetation of the respective countries are quite opposite in their seasons of bloom, giving Cuba the advantage of the dry season for the handling of her honey crops.

THE QUEEN REARING DISCUSSION.

Under the caption, "Can Good Queens Be Reared by a Cupful of Bees?" Mr. Alley, in the American Bee Journal, takes up the cudgel in the affirmative, and cites instances in which he has accomplished this very thing. Indeed, a certain queen which was but a chance product from one of the miniature boxes that he uses as a fertilizing hive, proved to be so valuable as a breeder that he would not think of selling her for $100. In reference to this observation, Mr. Alley takes occasion to remark: "How this statement will make Editor Hill, of the American Bee-Keeper, jump! Mr. Hill does not think any queen is worth $100. I do; and I know the full value of a good breeding queen, and I think there are many queen-dealers who appreciate the value of a good queen."

Brother Alley is an expert in his line. It is doubtful if the world holds a more proficient queen breeder. His observations in regard to queen-rearing matters are full of interest and instruction. He is a master whom we all respect; but the origin of some of his notions in regard to other people's ideas and plans, has long been somewhat of mystery to us. The above quotation is a case in point. He says we do "not think any queen is worth $100." As we have never said we did not think any queen is worth $100, we question the source of Mr. Alley's knowledge. If his conclusions have been arrived at through telepathic influence we have to assure him that his apparatus is "out of fix." Perhaps an evil spirit has censored the telepathic message enroute. Maybe Brother Alley really don't care to see the point in regard to high-priced queens, which we have discussed in this journal. "There's none so blind as those won't see." We are inclined rather to attribute Mr. Alley's misconstruction of statements to careless reading, rather than wilful misrepresentation. This idea is borne out to some extent in the article referred to above. Mr. Alley takes unto himself a quotation as the text for his article, which is not his at all. He starts out by saying, "On page 707 I am quoted thus:" and proceeds to reproduce what Arthur C. Miller has written in the American Bee-Keeper. Mr. Alley should give others a more careful reading before diving into them and making public statements as to their position. It is a courtesy due alike to his coadjutors and opponents in discussion.

COMB-BUILDING IN THE OPEN.

Owing to the retiring nature of the honey-bee—its natural habit of conducting its domestic operations behind "closed doors"—its admirers usually take great interest in observing their home life, whenever opportunity is afforded.

In tropical countries it is not so rare to find a colony doing business in the open air. We well remember a scene of this kind, in which we were intensely interested, many years ago, on the south coast of Cuba. The horizontal hollow log, placed about a foot from the ground, which served as a "hive" for an enormous colony, found its capacity inadequate during the honey flow, and had extended its beautiful white combs some distance from the open end of the log, connecting them with adjacent shrubbery and vines. Several of these honey-laden combs, attached to delicate vines and fragile stalks of grass, had weighted them to the ground. The vines of the wild morningglory from the blossoms of which nectar was gathered, grew through the solid combs of glistening honey and spread their foliage about it. It was a novel sight to a northerner. We have since seen several similar instances of comb-building in the open air, both in the north and in southern countries.

The picture on page 26 from the British Bee-Keepers' Record, of London, was sent to that journal by Mr. J. B. Hewett, and shows an extraordinary case of open air comb-building in the garden of Bitterly Court, Ludlow, England. Following is the comment of Mr. Hewett in relation thereto:

"I enclose a photo which I think will interest your readers, as bearing on the question often discussed, of winter quarters.

"We pack up our bees with every care as winter approaches, and yet here is a stock which passed last winter without any shelter whatever, beyond the shelf from which the combs are hung and the two side walls of the little old-fashioned bee-shed projecting just far enough to break the force of the wind.

"The photograph shows them exactly as I saw them at the beginning of last April, and I was assured by their owner that they had remained so throughout the winter, though at one time there was a foot of snow on the ground.

"It will be seen that their combs cover nine courses of brickwork, and therefore hang to a depth of 31 1-2 inches. I need hardly explain that the stock was placed on the shelf in the box-hive shown, and worked their way down through a hole in the wood of the shelf."

HERE WE ARE AGAIN.

The following letter, relative to the "Southern" honey question, presents the view of one of the northern dealers:

Cincinnati, Jan. 14, 1903.

Editor American Bee-Keeper:—

I notice lately you desire that dealers use the term "Amber," when quoting "Southern" honey.

We being exclusive honey dealers and receiving shipments from the North, South, East, West, as well as Cuba, and other foreign countries can speak from experience.

"Amber" and "Southern" are trade terms, thoroughly established, representing two distinct characters of honey, and should not be changed.

We do not believe in confusing terms with buyers. If the South, as a whole, produced the finest on earth, you would be anxious to have the term "Southern" used. It devolves upon the producers to take more pains with their product, and when they do, you will be proud of that term. By educating them in the proper care of honey, and urging them to put theirs in marketable shape, you will accomplish the desired result.

Many big buyers refuse to buy "Southern," "Cuban," or any "Foreign" honey, because of the poor packages, lack of care, and the amount of foreign matter, found in many shipments. A number of producers in the South on the contrary, market their honey in first-class shape, and if all would follow their example you would soon change your opinion.

Yours truly,
Fred W. Muth.

Mr. Muth has the honor of being the only dealer of our acquaintance who refuses to see the injustice of this practice, and his argument in favor of continuing the habit is exceedingly weak. Let us notice points which he sets forth in support of his position:

"I notice lately you desire that dealers use the term 'amber' when quoting 'Southern' honey," says Mr. Muth. Where our correspondent "noticed" this fact (?) he does not say. We have never even suggested the use of the term, "amber," in quoting southern honey. We do not recommend the use of the term "amber." On the contrary, we heartily disapprove of its use, for many reasons. Some southern honey is white, some is dark and some is amber, as is the case with honeys from other divisions of the United States. "Amber" would be no less absurd, though perhaps less unjust, than "Southern." Amber honey, from whatever corner of the earth, should be called "amber," and white, should be called "white."

Mr. Muth says: "We being exclusive honey dealers and receiving shipments from the North, South, East, West, as well as Cuba, and other foreign countries, can speak from experience." Just what bearing this "experience" has on the question in point, is not apparent. Would Mr. Muth have our readers believe that experience as a honey dealer carries with it license to slander and degrade the products of those upon whom he is dependent? Does "experience' as a honey dealer give him the right to drag into disrepute all the honey produced in the South? Are the progressive bee-keepers of the South expected to accept Mr. Muth's "experience" as compensation for the annual losses resulting from the absurd practice which he defends? Mr. Muth should not assume that he holds a monopoly upon "experience;" and we predict that he will have had more experience when he has been in the business longer that he now has.

Mr. Muth tells us that "'amber' and 'Southern' are trade terms, throughly established, representing two distinct characters of honey, and should not be changed." If Mr. Muth will observe very carefully he will discover the fact that the latter trade term is not so "thoroughly established" as it once was. If he is progressive, he will readily relinquish bad customs, though "thoroughly established" in earlier days, and adopt the usages incidental to modern advancement. In the days during which this trade term became established, we were without a honey exchange or any recognized system of grading and quoting honey. "Trade terms" established in those days are necessarily inadequate to present conditions, and their continued use by a very few dealers at this time tends not to enhance the progressiveness of their adherents in public estimation.

In his fourth paragraph Mr. Muth makes a wild shy, and goes after vagaries which belong not to this generation. We beg to remind him that it is a condition which concerns the immediate present, in which we are interested, and which is under discussion. If the South, as a whole, produced the finest on earth, we should not want nor expect that the product be quoted any differently than the products of other sections—that is, in accordance with established customs of classifying different grades; as, for example, "white," "amber," "dark," etc., the system already in vogue by the most progressive dealers, producers and associations of our country. Our efforts to correct an erroneous and unjust habit with a very few dealers, is not actuated by any personal motive. This journal has no sectional interests; its home is in the North, but it is pledged to serve the interests of all American honey producers, wherever located. Not to exceed twenty per cent. of its patrons are located in the South, but no fair-minded producer in the North or West would wish to see the gross injustice to the progressive Southern bee-keeper, which Mr. Muth defends, continued The South does, today, claim to produce honey that merits a place beside the best grades of the North and to quote the most inferior products of the slipshod bee-keeper as "Southern," is an act that is wholly unwarranted, unfair and insulting. Mr. Muth will find few sympathizers in any part of the country, even among the dealers, we believe and it is difficult to comprehend his motive in standing alone in defense of a practice which is without a single commendable feature, and is so obviously unjust to those for whom he professes friendship.

During the past season Mr. O. O. Poppleton shiped to Mr. Muth's company something over sixty barrels of honey. According to Mr. Muth's concluding paragraph, "many big buyers" would "refuse to buy" this honey, because of the poor packages used, lack of care and the amount of foreign matter in it. For Mr. Muth plainly says "many big buyers refuse to buy southern honey," for the reasons stated; and Mr. Poppleton's honey was certainly "Southern." His final sentence contradicts the preceding one. If "southern" honey is dirty honey, it cannot be marketed in first class shape.

Honey of a high and desirable grade should be thus classified, regardless of the section of the country from whence it comes. The intermediate grades and colors should be designated by a term that will apply to similar grades the country over. Inferior honey should be given a name that would fit it wherever found, without needlessly reflecting upon first-class goods which may have been marketed from the same locality; and brother Muth, if he proposes to remain in the business and retain the respect and patronage of the bee-keepers, might as well abandon the old-fashioned ways which seem so near and dear to him. There is no alternative.

If you like The Bee-Keeper, please tell your friends so, and ask them to subscribe.

THE "NATIONAL" ELECTION

The following announcement of the result of the December election is received from President Hutchinson:

Flint, Mich., Jan. 3, 1903.

Editor American Bee-Keeper:

Having received from Ellis E. Mason, Secretary of the National Bee-Keepers' Association, the results of the December election for General Manager and three Directors, I make the following announcements:

Whole number of votes cast for General Manager, 610, of which N. E. France received 489, E. T. Abbott 117, scattering, 4. Mr. N. E. France is hereby declared elected as General Manager.

Whole number of votes cast for Directors, 567, of which G. M. Doolittle received 364; W. F. Marks, 262; Thos. G. Newman, 240; Udo Toepperwein, 149; Wm. A. Selser, 105; Wm. McEvoy 86; G. W. VanGundy, 74. The rest of the votes are scattered among 120 members, no one of them receiving more than 32 votes. Mr. G. M. Doolittle, having received a majority vote, is hereby declared elected. No other candidate for Director having received a majority vote, no other is elected. The constitution says that the directors' term of office "shall be four years, or until their successors are elected and qualified." This leaves Mr. Thos. G. Newman and Mr. W. F. Marks still in office—at least, for the present.

W. Z. Hutchinson,
President National Bee-Keepers' Association.

Considerable dissatisfaction has been expressed in regard to the form of the ballot used in the above mentioned election, upon which was printed the name and endorsement of Mr. France for general manager, and the author of the form used has been subjected to very severe criticism in several instances. In explaining the circumstances responsible for the act, Mr. Secor says: "He (France) was the only person nominated in a proper manner. His name had been regularly presented to the chairman of the board, and seconded by at least half a dozen members. It therefore came to me officially, and I was obliged to notice it."

Referring to irregular nominations contributed to the press from various members, Mr. Secor says: "I now think I remember one person who nominated several members for the same office, in this manner. By what constitutional provision is the board of directors, or general manager required to take cognizance of every suggestion that every person may write to periodicals published in the United States? Why were not these nominations made to the proper officials of the Association? Unless these matters are brought to me officially, I cannot take the responsibility of endorsing them."

With regard to the constitutional amendments proposed at the Denver convention, it is explained by Mr. Secor that he never saw a copy of them until after the voting blanks had been sent out to the membership; and then the copy which came to his notice was but a stenographer's report. It is, therefore, evident that Mr. Secor could not well submit to vote so important a proposition without having official information as to its details. His mature experience as a legislator eminently qualifies him to act in such matters in strict accord with parliamentary propriety; and we doubt not that official business through regular channels has received due attention.

The legality of the election, which some have drawn into question, has been ascertained and established beyond question, according to the best authority. Therefore, to set aside a legal election would preclude the possibility of conducting another legal one. The constitution makes no provision for more than one legal election each year. It now behooves each member to stand by the new general manager, a gentleman of ability and universally respected, and assist his efforts in our behalf during his term of office. Factionalism and strife should be put down, and the business wheels of the Association machinery set in motion. If neglect or failure to comply with the requirements in such cases has resulted in the disappointment of some members, the the opportunity to rectify former mistakes will soon come again. Mr. France is a practical bee-keeper and has been chosen by bee-keepers as one among their number qualified to fill the position of general manager. Perhaps his election proclaims the advent of a new and more useful era in the Association's history, as foreseen by Mr. Simpson, and discussed elsewhere in this number of the American Bee-Keeper.

LOADING THE TEXT WITH ADS.

A Michigan reader writes that our remarks in regard to the publishers' habit of not stuffing the text of these columns with advertisements of their bee-keepers' supplies, are exactly as he has always seen it, and that it is a feature which our subscribers should appreciate.

Another subscriber in one of the West India islands, writes: "I do not agree with you in the matter of The Falconer Company's advertising, in The American Bee-Keeper. I think they should have at least a whole page in each issue. They turn out the best supplies in the world, and should not be so modest about it." Evidently our southern correspondent has misunderstood our meaning. Advertising in the advertising columns is appropriate and legitimate. We quite agree with him that it would doubtless be an advantage to the Falconer Company, as well as of interest to our readers if more frequent announcements of this kind were inserted in our advertising columns, and we have called their attention to the matter. It was not to this class of advertising to which we had reference, however; but the very prevalent habit of so editing manuscript that the particular attention of the reader is drawn to certain articles, with the evident purpose of eliciting his interest and effecting sales.

Modesty, no doubt, may be carried to extremes; yet it is a virtue no less admirable in the business world than in social life. Publicity is a prerequisite to business success, but there are legitimate methods of acquiring notoriety, and the infusion of personal references into the text of a trade journal is not one of them. This practice of booming their own goods through the columns or what purports to be a trade journal, and thus transforming it into a house organ, in the narrowest sense, is responsible for the recent action of Third Assistant Postmaster-General Madden in attempting to deprive all monthly and semi-monthly publications of the second-class postage rate, which, if enacted, will result in the necessity of the advertising schemes having to pay full price for the "whistle," after all. It will further, cause the innocent to suffer equally with the guilty. The public appear to more patiently endure the imposition than our Uncle Sam.

Gen. Manager Burnett, of the Jamaica Bee-Keepers' Association, writes that his society is in a very flourishing condition; and the list of its members, with which he has favored us, attest its rapid growth. We note also that while the local price of honey has been from 18 to 25 cents a gallon, the association has advanced, in some instances, the latter figure to its members; and when account sales have arrived from the European markets, where the association representative keeps hustling for business, an additional "shilling" has come to the producer—thus giving him 50 cents per gallon. Verily, the bee-keeping world is awakening. The old-time interest in merely "social" gatherings of bee-keepers, is giving place to business meetings and substantial, hard thinking, as to means by which honey production may become a more reliable source of livelihood. It is well that things have taken this turn.

The Progressive Bee-Keper has put on several new editors lately, and yet it seems the force is unable to grind out enough original mater to fill its columns, or to see that proper credit is given the American Bee-Keeper for the editorial items taken bodily from our pages. There is evidently some chance yet for even the "Progresive" to progress, just a little.

King Oscar of Sweden has conferred the royal Order of Vasa upon Dr. John A. Enander, of Chicago, the oldest editor of a Swedish newspaper in this country.

Pierpont Morgan is undoubtedly the most fascinating figure before the world today. "Mr. Morgan, His Advisers and His Organization" are discussed at length in the January Cosmopolitan by John Brisben Walker, who spent ten days between Mr. Morgan's and Mr. John Mitchell's offices, in September, in the attempt to settle the coal-strike.

Pelicans Have an Island Colony on Florida's East Coast.

From time immemorial this little island has been the principal, if not the only, breeding-ground of all the brown pelicans of the east coast of Florida Though there are hundreds of other islands, apparently just as good, this one alone attracts the pelicans. Dastardly plume-hunters have, at times, all but annihilated them; egg-hunters have robbed them of every egg in sight; yet they remain faithful to the home-land of their ancestors. Creatures of habit, they are, like chickens that persist in roosting in the orchard, despite the advent of winter, cold and storms.

Naturally, we were interested to make an estimate of the population of Pelican Island. As nearly as we could count, there were 450 nests at the east end, 512 at the southwest, and 14 at the northwest, making 976 in all . This means 1,952 adult birds on the island.—From the City of the Pelicans, in January Outing.

HONEY AND BEESWAX MARKET.

WASHINGTON GRADING RULES.

Fancy.—All sections to be well filled, combs straight, of even thickness and firmly attached to all four sides; both wood and comb unsoiled by travel stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy white," "No. 1, dark," etc.

Chicago, Jan. 9.—Best grades of white comb sell, 15 to 16 cents per pound. Travel-stained and light amber, 13 to 14 cents. Darker grades, 10 to 12 cents. Extracted, 7 to 8 cents for white, and 6 to 7 for ambers. Beeswax, steady at 30 cents.—R. A. Burnett & Co.

New York Jan. 10.—The supply of honey is not very liberal. Demand, fair. We quote comb, 12 to 15 cents per pound. Extracted, 4 1-2 to 5 1-2 cents. The demand for beeswax is good, with insufficient supply at 29 to 30 cents.—Francis H. Leggett & Co.

Kansas City, Mo., Jan. 12.—There is a good demand for comb honey, with the supply light, at 12 to 15 cents per pound. Extracted sells at 6 to 8 cents. Beeswax sells at 30 cents, with a light supply.—Hamblin & Sappington.

Buffalo, N. Y., Jan. 12.—The honey market at present is quiet. but very firm on all grades. Strictly fancy white comb, 16 to 7 cents, and occasionally 18 cents. Other grades, 12 to 15 cents. Receipts are very light and are likely to remain so. Prices should be well maintained the balance of the season. Moderate demand for small lots of extracted at from 6 to 8 cents. Beeswax, 25 to 33, as to quality.—Batterson & Co.

Cincinnati, Jan. 10.—The demand for all kinds of honey has fallen off considerable in the last few weeks, owing to the many other sweets offered at this season of the year. Lower prices are no inducement to increase the consumption, as the demand is not there, and will not be until about the end of the month; consequently it is folly to offer at lower prices. We quote amber extracted in barrels at 5 3-4-6 1-2 cents; white clover and basswood 8-9 1-2 cents; fancy white comb honey 16-17 cents. Lower grades hard to sell at any price. Beeswax firm at 29-30 cents.—The Fred W. Muth Co.

Cent-a-Word Column.

It frequently occurs that some member of the Bee-Keeper family desires to advertise for sale some article the value of which will hardly justify the payment of our regular rates; and yet it would be an accommodation if he were permitted to tell others what he has to offer. Some other reader may be in need of just such an article as that of which he wishes to dispose. Again, it is as frequently desired to exchange commodities for which we have no especial use, for something more desirable, and such exchanges are often made to mutual advantage. We have, therefore, decided to place at the disposal of our readers a column devoted to the accomplishment of these ends; though we cannot be responsible for any possible dissatisfaction which might arise as a result of such exchanges. The rate will be uniformly one cent for each word, each month; no advertisement however small will be accepted for less than twenty cents, and must be paid in advance. Count the words, and remit with order accordingly.

$40 per month and expenses paid good men for taking orders. Steady work. Apply Protective Nurseries, Geneva, N. Y.

WANTED—To exchange six-month trial subscription to The American Bee-Keeper for 20 cents in postage stamps. Address, Bee-Keeper, Falconer, N. Y.

AGENTS WANTED to sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Jamestown, N Y.

FOR SALE—A Hawkeye, Jr. Camera Complete. Uses both film and plates. Cost $8.00, will sell with leather case for $3.50 cash. Address Empire Washer Co., Falconer, N. Y.

A TANDEM BICYCLE (for man and lady) cost $150, in first-class condition, was built to order for the owner. Tires new. Will sell for $25 cash. Satisfaction guaranteed. Address J. Clayborne Merrill, 130 Lakeview ave., Jamestown, N. Y.

TO MAKE CLEAR, beautiful photographs use a Turner Camera. Simple, excellent, inexpensive. Dixie Developing paper and Tubes have simplified the picture-making art. We refer, by permission, to editor of The Bee-Keeper, who has used over fifty gross of Dixie paper. Sample dozen (4x5 paper, with developer, 20 cents. Write today for fuller information.

M. K. Turner, 102 N. Pryor st., Atlanta, Ga.

W. M. Gerrish, R. F. D., Epping, N. H., keeps a complete supply of our goods, and Eastern customers will save freight by ordering of him.

The W. F. Falconer Mfg. Co.

IF YOU ARE INTERESTED IN BEES, POULTRY OR BELGIAN HARES, WRITE TO THE W. T. FALCONER MFG. CO., JAMESTOWN, N. Y. THEY WILL BE PLEASED TO MAKE YOUR ACQUAINTANCE; AND THEIR CATALOGUES WILL INTEREST YOU.

DO IT QUICK!

$1.00

Sample Free.

The Modern Farmer and Busy Bee, 5oc.

The American Poultry Journal, 50c.

Gleanings in Bee Culture $1.00.

All for $1.00, if you mention this paper, and address

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$15.00 A WEEK AND EXPENSES, FOR MAN WITH RIG To introduce our POULTRY MIXTURE in the country; straight salary; weekly pay; year's contract. We furnish bank reference of our reliability. Address, with stamp, EUREKA MFG. CO.. Dept. V East St. Louis, Ills.
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Devoted to Poultry, Farm and Household. The only woman's poultry journal published. Send us the names of three or more farmers' wives and a dime and get this journal one year. Address,

WOMANS POULTRY JOURNAL,
tf. Jeffersonville, Ohio.

E. B. BLETT, of Belding, Mich., has secured full control of Blett's Poultry Pointers, formerly published by Poultry Pointers Pub. Co., of the same place. He will move the office to Fenwick, Mich., and publish it from there.

$1,000

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Do not let this chance go by, but send us 10 cents in silver to-day, and receive The Welcome Visitor for one year. Address THE WELCOME VISITOR, 404 South Troy St., Chicago, Illinois.

AGENTS Wanted in every town for our Washing Machines.

You can double your money every time you sell one and they sell easily. We have sold over 150,000 in the last fourteen years. They are cheaper than ever. Catalogue Free.

THE EMPIRE WASHER CO., Jamestown, N.Y.

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Balance of this year free to new subscribers.

THE FRUITMAN,
Mt. Vernon, Iowa.
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My skin was sallow, I had a bad taste in my mouth in the morning and my breath was offensive at times and occasionally I had a bad headache. By the use of Ripans Tabules I am now in a condition to attend to my daily duties, my appetite is excellent and my digestion much improved.

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The Five-Cent packet is enough for an ordinary occasion. The family bottle, 60 cents, contains a supply for a year.

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1tf 1123 N St., Lincoln, Neb.

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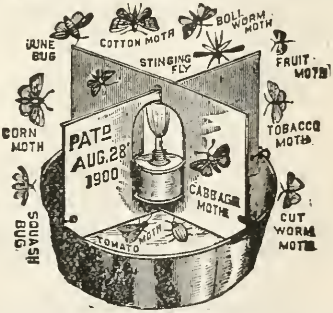

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We are cash buyers of Extracted honey. If you have any to sell, mail sample quoting best price delivered Cincinnati. We pay prompt on delivery. Reference, German National Bank, Cincinnati. O. or O. O. Poppleton, Stuart, Fla.

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Write for booklet. Agents Wanted.

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There was a man in our town who thought him wondrous wise; he swore by all the fabled gods he'd never advertise. But his goods were advertised ere long, and therby hangs a tale: The ad. was set in nonpareil (this size), and headed SHERIFF'S SALE.—M. T.

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should have a copy of

The Amateur Bee-keeper,

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Ten Charts, Piano, Organ, Violin, Mandolin; Banjo, Guitar, Viola, Violoncello; Contra Bass, Cornet, Fife, Chart of Chords, 50 Studies; 17 Dances and Dictionary, 8 page, only 10 cents for all.

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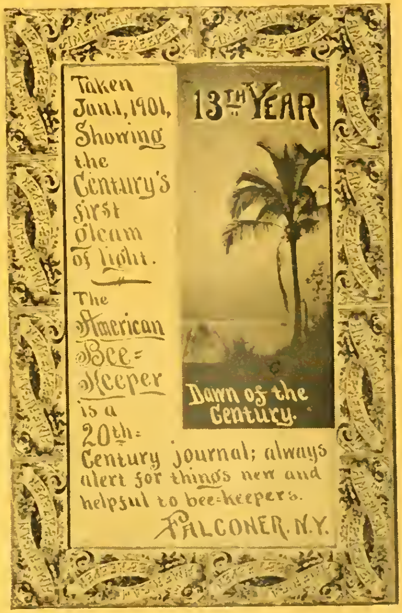
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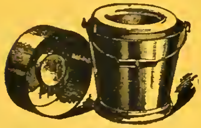

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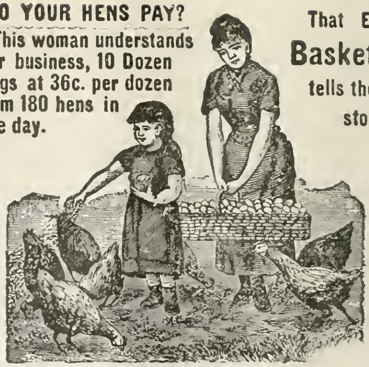

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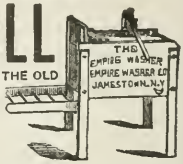

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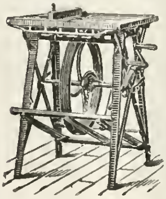

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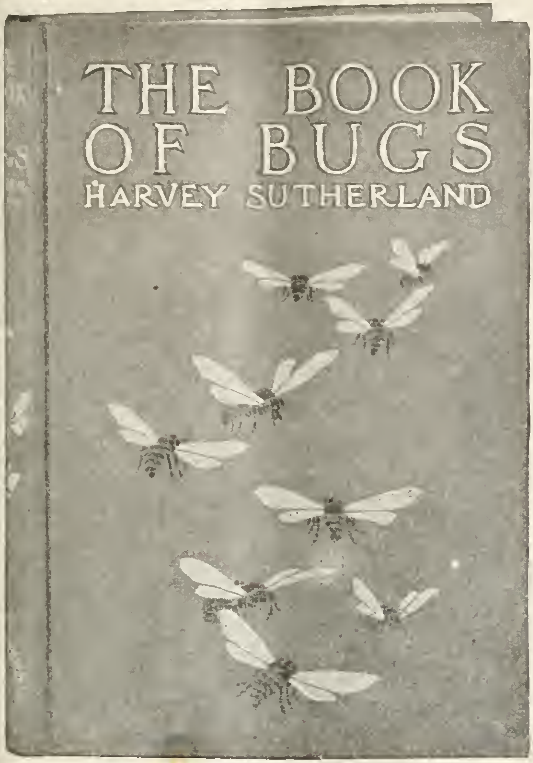

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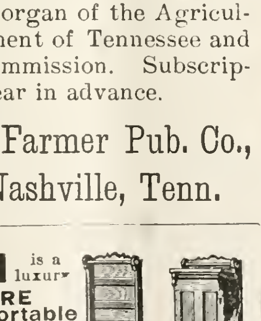

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The Bee Still Affords a Rich Field for the Studiously Inclined.

(Arthur C. Miller).

IT MAY sound pedantic to say that knowledge of bee life is as yet in its A B C but be that as it may and at the risk of calling down upon myself a deluge of denial and counter assertions, I here make that statement and will give some of my reasons, hoping thereby to stimulate observation, to the end that light may be shed on many at present unsolved problems of practical apiculture.

Thanks to the patient labors of such men as Cowan, Cheshire and others before them we have a very full knowledge of the anatomy of the honey bee, of the functions of some organs and an inkling of the use of some others, but of still others we have no idea at all of the part they play in the bees' life and work.

Many plausable but unsupported statements of the internal life of the hive are accepted without question. "It is so because the text books say so." But who informed the author of the book, or how came he by his knowledge? Only too often he has taken it from some prior work or seeing in some magazine a plausable statement by some popular or temporarily prominent writer, has copied it as fact. An example of this is the belief that bees use their head to ram the pollen into the cells, a notion too absurd to deserve attention were it not for its widespread acceptance.

As the pellets of pollen are dropped on the floor of the cell by the gathering bee, a mere ramming in by the head of any bee would pack it very unevenly, much at the lower side and little or none at the upper, a consideration which heretofore seems never to have atracted attention. Also as every organ is adapted to its particular function we should expect to find the front of the bee's head hard and smooth, if it was intended and used for this purpose, whereas it bears a pair of delicately articulated antennae, and simple and compound eyes protected by a multitude of fine hairs, surely anything but a battering ram. As a matter of fact, the pollen is packed by the bee with its mandibles and is a process of pushing, kneading and spreading. The work can often be found in an incomplete stage and the pollen will then be found thickest at the lower part of the cell, but it does not remain so, for that, or the next lot will be worked into the upper part making all even.

While investigating the storing of pollen I discovered that bees are decidedly fond of the freshly gathered article, licking it up and biting it off from the dropped pellets as well as from the legs of the laden bees, an action to which the latter always object. The new pollen is readily taken up by the proboscis and passes directly into the mouth. Just how it gets from the mandibles to the mouth I do not know, but it is done rapidly and in most surprising quantities.

We say that nectar is converted into

honey in the bee's honey-sac. That this is but the begining I feel very sure. I have reasons for believing that the process continues in the comb. (I refer to chemical change, not to mere thickening.) I have watched individual bees spend ten to fifteen minutes licking over every bit of the inside of a cell of virgin wax, (not varnishing it with propolis) and surely that deposit of saliva (?) was for a purpose. Knowing the active properties of saliva in mammals, is it unreasonable to believe that the gland secretion put on the walls of the cells have a specific action on the nearly raw nectar stored in them, particularly when we consider the temperature at which the hive (colony) is normally kept?

Another matter that often puzzles bee-keepers, veterans as well as novices, is to readily determine when bees are gathering nectar and if so from what source. It is the easiest thing in the world when you know how. I learnt the kink from Mr. Alley. With the thumb and forefinger grasp an incoming worker by the wings; with the second finger of the same hand, push against her abdomen near the end but just above the sting, and at the same time place a finger of the other hand against the worker's mouth. The nectar will flow out upon it and taste will readily determine the source from whence it came. If the novice is afraid of pushing on the sting, let him "set" the worker down on the hive cover. Any means that will cause the telescoping of the abdomen will accomplish the purpose. The bee is not injured and is soon off after another load.

Whether or not propolis is used in refinishing recently vacated brood-cells I cannot yet positively say, but I doubt it. In the manipulation of this substance bees use either mandibles or proboscis as circumstances of temperature, space worked in, etc., dictate. One prominent author has stated that "the use of bee glue is to cement the combs to their supports." As propolis is nearly fluid at 90 degrees F. it may be readily imagined of how much value it would be in supporting a large comb full of honey!

One of the strange things of bee life which I will be thankful to have explained is the habit the bees have of "grooming" the queen and each other. The queen will pause on the comb, a few bees will gather about her and gently and steadily begin to bite or pull at the hair covering her body, head and legs. They will keep it up for ten minutes at a stretch, she standing perfectly still, only now and then slowly waving her antennae. Finally one bee will stop, then another and in a moment more all have ceased and the queen proceeds on her duties. Workers will treat each other in a similar way, but for shorter periods.

Another puzzle awaiting a solution is what governs a queen in her acceptance or refusal of cell for the depositing of an egg. She will walk rapidly across several cells, then pause and inspect several, possibly lay in one, then move on. She will lay in a deep one here, a shallow one there. At this cell she faces the top of the hive; at that, the bottom, and at the next one she turns around two, three or four times after her abdomen is way into the cell. Into some cells she has scarcely backed before the egg is deposited; in the next few she spends from ten to forty seconds each. Could we but learn what makes a cell attractive to a queen, we could then, possibly, contrive to have artificial queen-cell-cups so treated that the queen would put an egg in each.

Regarding the control of sex of the egg, it has been suggested that possibly the straddle of the queen's legs when depositing the egg, might in some way affect the muscles controlling the spermatheca. A little close study of the multitudinous attitudes taken by a queen show that theory to be untenable.

At one time the queen moves slowly among the bees—who, by the way, seldom deign to notice her—and a few moments later she is ranging nervously among the combs and again she stands motionless in some out of the way spot, until the watcher's patience is exhausted. Though the bees become very much disturbed when the queen is removed, they treat her in anything but a respectful manner while present; they scramble over her back, rudely jostle her and push her about and leave her to beg for food when she wants any.

The study of the queen's movements in the hive is intensely fascinating and it is always with great reluctance that I cease from watching her. Parenthetically I would say that I had to devise novel methods for watching her, details of which will be given in a future article.

Here is another unexplained bee trick: At times a bee will cling firmly to the comb, slightly elevate her wings and then shake as with the ague; a little further on another bee will take it up, then another and another, until many of them are at it. Each bee continues but for a moment or two. What the object is I know not, but I have several times noticed that it preceded the absconding or abnormal swarming of the colonies sometimes by a day or two, sometimes by a few hours.

Another strange act of the bees is "raking." Poised on the middle and posterior pairs of legs, the bee swings forward and backward, at the same time rythmically opening and shutting the mandibles, and with the anterior legs "raking" seemingly imaginary matter backward and beneath, much as a dog or rabbit rakes back excavated earth. Sometimes the alighting board and whole front of the hive will be covered with a single layer of bees, all busily "raking," and the same individuals will continue it until the observer tires of watching them. Some strains are more addicted to it than others; some rarely show it. What its object is, whether it denotes unfavorable conditions, pleasure or distress, I am unable to even guess.

The correct answer to some of the foregoing questions may help us to better practices of many parts of bee culture, such as queen rearing, queen introduction, honey ripening, stimulative feeding, etc., etc.

Providence, R. I., Jan. 22, 1903.

SAVING TIME.

A Peculiar Letter from a Peculiar Individual.

(A. Q. Cumber).

EDITOR Am. Bee-Keeper: I've been reading your yellow journal for the last ten years. I've been satisfied to soak what t'other feller has had to say in all the bee papers, until I'm swelled up like your catnip balloon, with ideas of quck methods, short cuts and streak-lightning ways of doing things.

I wouldn't have felt called upon now to spill some of the contents of my dilated brain before the readers of your paper, only for your remarks in the December number, page 217, where you attempt to discourage the youthful bee-keeper from developing the faculty of time-saving. You are evidently like lots of others, who seem to go about their business just as though they had always to live in this world, or else could take the job with them to finish it in eternity. Here I draw the line. I can't keep silent. I want to warn the young that you speak to; against a violation of the sixth commandment. "Thou shalt not kill." That means you shall not kill time, as much as anything else. People who take the long way to do things will have to answer for the murder of time. It makes me tremble to think of the account that Old John Hardscrabble will have to render for the time he has lost sitting on that bee-hive. It's a horrible example to set your young readers. Oh, that I could impress upon their young hearts the necessity of doing things quick, and getting them out from under foot, and ready for another job. How I do admire those "lightning operators," so full of "kinks" and short cuts. Think of the fund those boys will have to their credit on the balance sheet of time when they are called hence, if they will only keep up the pace while on earth and what a genuine satisfaction it will be to contemplate this wealth of accumulated time, as a result of the savings of each day. It's a grand and inspiring thought that should be taken home to the heart of every young bee-keeper.

I haven't time to say very much along this line just now, but I have saved enough time in the last year to give me plenty of surplus to draw on, if I can induce your young readers to do the same thing, by pursuing the subject further in a future issue. Think of the time we could save jointly if we all adopt the quick ways of doing everything. I'll just give them a little advice this time, and will come again later.

Now listen, my young friend! If you've got a job on hand, do it, and do it quick, and get it off hand. If you've got honey to extract, extract it. Some will say, "wait till it's sealed." I say, sling it out. You lose time waiting for the bees to seal it; besides it slings out so easily when it's thin, too; and here again is another important saving of time. Time is saved in cutting of the caps and twisting the extractor. Lots of people don't know the difference between thick and thin honey, and you can sell it to them. If it sours before you can find a customer who don't know the difference, you can make it into vinegar. You will have saved enough time to half pay the cost of production, anyway; and as it will be already sour, you will save almost enough time in waiting for it to finish up souring into good vinegar to cover the other half, and the result will be clear profit. I expect Old John Hardscrabble will attempt to make it appear that 'taint so, and maybe will liken my logic to the Irishman who went to buy a stove. The dealer strongly recommended a certain stove, saying, "If you take that stove, you'll save half your wood." "I will?" says Pat, "then be jabbers, I'll take two av em, and save all the wood." The reader can figure it for himself. Figures don't lie.

It don't pay to be too exact and particular, if you figure your time as you ought to. "Time is money." Don't forget that wisest of proverbs. Cut it out of this page, my dear young reader, and paste it in that new bee hat—when you have time—and make a break for the apiary. If you are to accomplish anything in this busy world you will not have wasted time in hunting up old sacks, rotten wood, saltpeter-rags or any such luxuries for smoker fuel. Grab a wisp of grass or catnip (I haven't got over that catnip fever yet) as you run and stuff it into the smoker upon arrival. The bees don't care what kind of fuel you use, nor whether it burns well or not. That's all bosh. Then, the time you will spend in trying to light it, will put you in proper humor for rapid work when you do get started, so if a lid fails to respond to your gentle touch when ready to operate on a hive, it will be promptly kicked off in true Coggshall style, and your business will be in plain view. The grass-stalks and catnip stems (catnip again, by Jove.) which stick out all round the nozzle of the smoker will help to keep it propped up in proper position. If the nozzle keeps coming off, you can write to the editor of The American Bee-Keeper and give the manufacturer general fits. Tell everybody that the smoker is "'buncomb," that it is made only to sell, not to use. This will be found a great relief when the strain of modern apicultural methods is beginning to tell upon your nervous system. The smoker will be out again by this time, but you can try again to light it, and the few stings, more or less, which will probably be administered while doing so, will have no bad effect. In fact, they will have much the same effect as "a few fleas" on a dog; they will keep you from brooding over the catnip fields that you haven't got. If, perchance, you should get a couple or three etxra sharp stings—say, under the thumbnail or on the end of the nose—and drop a comb of honey on the corner of the hive, while the smoker is out, don't worry because some one has said you should take more time and be careful. You are still ahead of the game, by reason of the time to your credit, and the bees will lick up all the honey again and put it back in the hive. The comb, when melted up, is worth 30 cents a pound, and you will sooner get your cash out of it. What if the colony should be robbed out? Probably this set of combs is just what you need for a new swarm or to upper-story another colony that would otherwise have had to build its combs.

And the idea of people using artificial cell-cups to rear queens. Think of the time it takes to graft the cells; and the time it takes to make the cups is simply a wanton waste of God-given time, for which you will be held accountable. Don't think of it—not for a moment—it's wicked. Get the cells started at once. Think of the time that the cells might be maturing if you hadn't stopped to graft them. Compute the saving of time in the hatching of the batch, if only you had used natural cups or cells already stocked. Bear in mind, my dear young reader, that the three and a half minutes that would thus get past you, go into the eternal beyond, never to be recalled. The thought itself is a sad one, when we consider the brief duration of life. Those 210 seconds are 210 messengers which will proclaim throughout eternity this catastrophe (that makes me think of catnip again) in your business life. When the queens hatch, the quickest way to introduce them is by the "dropping" method. That is, first drop them into a saucer of honey, then drop them down between the frames. The bees will soon catch (almost like catnip) the spirit and promptly drop them out of the entrance. It's the quickest way to do it, though; and unless your name is Alley, the chances are nine and a half in ten that the queens are more profitable dead than living, anyway; so you have no real cause to grieve.

The burden of my mind for a year or so has been the length of time it takes to clip a queen, and I am perfecting a beautiful little gun for shooting off the wings. It's a repeater, self-cocking, side-ejector and uses smokeless powder. No infringement on Krupp, Winchester, Gatling or other rapid-firing arms. Strictly original, and fills a long-felt want. I have figured the time it will save when in use in all the apiaries of this country, but I haven't time to place the figures before my readers just now.

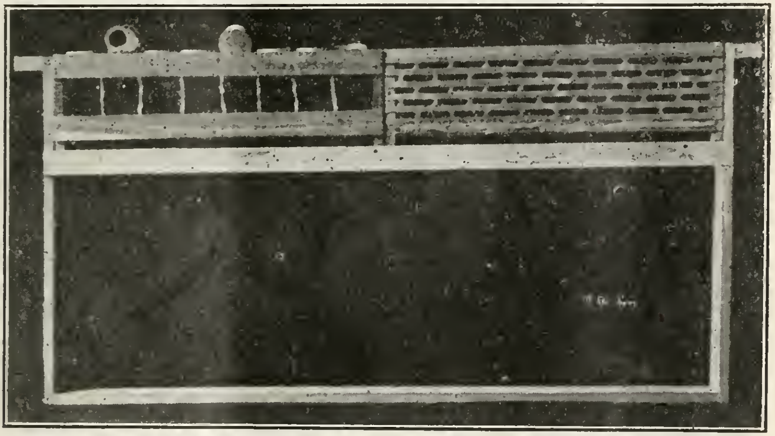
And doesn't it make me tired to hear people advise young readers who have a hive of bees to move, to move it fifteen inches, or even a foot each day for two weeks; when it could be lifted and carried bodily in two seconds, instead of nipping—Oh, catnip, c-a-t-n-i-

QUEEN FERTILIZING ATTACHMENTS.

How from Eighteen to Twenty-four Queens a Month May Be Mated from a Three- or Four-Frame Nucleus Colony, Each Thirty Days.

(Swarthmore).

TO THE inside of an ordinary 8-frame dovetailed hive attach six Swarthmore fertilizing boxes, three on each side, laid flat against the side-walls of the hive. Provide a 3-4-inch flight-hole into each box, two on each side and one at each end of the hive-body.



OPEN-TOP BROOD FRAME WITH NURSERY CAGES IN PLACE.

Supply each box with small combs containing honey, pollen, etc., (brood is not imperative) and hang four large brood combs in the space between the boxes. Two of the large combs between the boxes should be the open-top type to receive four Swarthmore nursery cages in the usual manner.

Now set this prepared hive onto an isolated stand, in the open, and run into it a goodly number of bees that have just been used in securing a batch of cells, making sure that no queen of any kind is with them.

After the bees are nicely settled in the hive drop a just-hatched virgin queen into each box, or, insert a ripe cell in the top opening of each box by means of Swarthmore shells, if you use that convenient method of queen rearing.

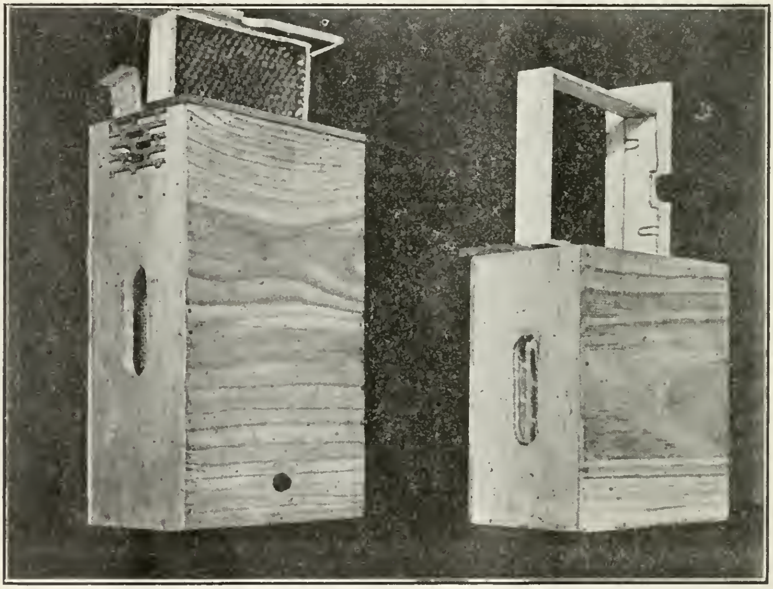
In due time the young queens will fly from the boxes and return mated; during which time queen cells of different ages are placed in the nursery cages, between the boxes, in such complete system that young queens are continually hatching in the nurseries, at least six every ten days.

The moment the queens in the boxes are found laying remove them all and in a day's time draw from the nursery cages six virgins to re-queen the boxes and thus proceed throughout the entire season, occasionally strengthening the colony by using bees that have been taken up for the purpose of starting other queen cells.

In this manner from eighteen to twenty-four queens per month may be fertilized from a single four-frame nucleus colony without the trouble of feeding, swarming out, etc.

It might be well to state, in this connection, that two of the cages between the boxes are covered on both sides with wire cloth, and candy is placed in the feeding holes, inside each compartment, to guard against starving the young queens. The other two cages are provided with perforated zinc so as to admit the workers who will care for and protect the cells from chilling until the day they are due to hatch, at which time they are shifted over into the screen-covered compartments to hatch.

In brief, the scheme of proceeding is as follows: Start your cells at intervals of three, five or ten days, according to the rapidity with which you wish to turn out queens; have them completed in full colonies and as soon as capped remove them and place them in the zinc-covered cages; just previous to their hatching, jump them over into the wire-covered cages to hatch; when the laying queens are taken from the boxes draw six of the virgins from the screen-covered cages and run them into the boxes, always taking the six oldest queens. By the above outlined proceeding it will be seen that supplies of virgins, about the correct age to fly, will be constantly on hand, already introduced, waiting their turn at the boxes, and if the system is followed closely from five to six fertile queens



FERTILIZING BOXES—INSIDE ATTACHMENT.

will be ready for caging every ten days.

The photographs herewith will give a correct conception of the details of the fertilizing boxes for inside attachment, also the open-frame with cages in place. The manner of applying the Swarthmore removable shells is also shown and the facility with which queen cells may be handled when harnessed in this manner will doubtless be appreciated by those interested in labor-saving devices and short-cuts.

Swarthmore, Pa., Jan. 19, 1903.

SHAKEN OR BRUSHED SWARMS

As Made Use of During the Buckwheat Season.

(F. Griener).

WHILE it is a pleasing sight to the enthusiastic bee-keeper, especially the beginner, to see the bees pour forth from their hives pelle-melle in the act of swarming, the sentimental part of the bee-keeping pursuit is of secondary consideration with the man who has hard work to provide the bread as well as some other things for his family. He would like it a great deal better if the "plaguy" things would never think of swarming.

I have read many articles on the subject of "shook" swarms in the different bee papers during the past year; the most of the readers will probably be familiar with them; suffice it for me to say here, that the object sought in making this kind of artificial swarms is principally to prevent natural swarming and thus do away with continuously watching our yards during a large part of the season. Even during the buckwheat season we are not entirely safe to leave our bees without an attendant. I have had heavy losses in some seasons. How to prevent them, has been a problem.

The majority of bee-keepers who practice the method of shaken or brushed swarms naturally increase the number of their colonies considerably. This is no more desirable with me, and others may be "in the same boat." We don't wish to increase any more than to make good the winter losses. We don't care to build any more new hives. We want to begin with so many colonies each year, etc. I therefore find it advisable to decrease my stock of bees after the honey season from clover and basswood is over, exchanging as much as possible "bees for honey." Before describing "how I proceed," I wish to make the statement that the localities giving us the greatest yields in white honey are little to be depended upon for fall honey, and vice versa. On this account I have come to the conclusion that migratory bee-keeping is the thing for me. In the spring, when the colonies are light, I take them to the best clover locality I can find within a reasonable distance. When the season is over I again move. This time into the hilly, buckwheat sections. It seems to be a fact that, though buckwheat fields may be plentiful on the flats and within easy reach of our bees, very little honey will be stored from them. Buckwheat on the hilly portions of our country yields abundantly, and the bees just boom. I find it therefore advisable to move. However, I do not move all colonies. Those that were made up from the full sets of shaken-off broob-combs are left. They are usually heavy and have the young queens.

The "shooks" with the old queens are the ones we move. They are light in bees as well as stores, and a great many may be taken at one load. It will be remembered that, when practicing shaking or brushing off swarms during the early part of the season, we give each swarm a reduced brood chamber in order to secure the largest possible white honey crop. These small brood chambers contain scarcely any honey and are in the best possible condition to move into the buckwheat. Before moving them they are carefully looked over and the age of the queens is conspicuously marked upon the outside of each hive, so that, when moving them, it will be an easy matter to place an old and a younger queen side by side in the new place, for each two of the colonies are to be united as a "shook," giving us an opportunity to dispose of the oldest queen.

At this time of the year it is a good plan to give each "shook" a set of combs, not less than eight L frames, providing we expect to winter them. If not, then fewer frames with comb or starters will do. The object of giving comb is apparent. We all know that more honey will be stored in the brood chamber when same is furnished with comb at the beginning. This is desirable, for we don't care to bother with feeding. Each colony must come out of the campaign ready for winter, though we may not obtain the greatest possible amount of surplus. One of my objects, anyway, is to obtain honey for wintering, not only for the colonies moved, but also such as were left in the clover region and failed to get their supply. Should I secure a surplus of heavy buckwheat combs, containing also pollen, I do not extract them, but use them in exchanging heavy combs filled with white honey from the colonies left. While I don't think honey extracted from the brood chamber is of as fine flavor as honey obtained from the clean combs of extracting supers, still the article is good enough for table use if we are not too exacting. It is always of good body at the least, and I find sale for it at a slightly reduced price. In order to obtain a good lot of these heavy buckwheat combs, I set apart a portion of the colonies moved at the beginning. The hives are not only filled with the brood combs from the shaken colonies but an extra set of them is given to each over an excluder. While it may not be necessary to make use of the excluder in this case I consider it safer to do so. The combs are more apt to be solidly filled with honey at the close of the season. As the season advances it may even be necessary to give an extra extracting super, should the season be favorable.

We must watch things and use our best judgment. No two seasons are exactly alike, and different treatment may be necessary in different seasons. I have found it profitable, for instance, to shake a part of the tierd-up colonies —those which were not shaken at the beginning of the buckwheat season— about the time when the season was nearly half over. This was done to further decrease the stock. They were shaken on half stories filled with comb or with empty frames and run for comb honey. Finally after the close of the season their bees were used to help up such colonies as proved too light in bees for successful wintering. They contained two pounds of bees and were a welcome acquisition to colonies that could not be expected to winter when left on the summer stand. This practice again gives us an opportunity to cull out undesirable or old queens. It pre-supposes that the bee-keeper has kept a record of his queens, their age and qualities.

Before settled cold weather comes I make a practice of moving my bees back to the home yard. I am trying to winter a part of them in the out yards according to the Arthur Miller plan, wrapping up in tarred paper, upon which I hope to report at some future time.

Naples, Ont., Co., N. Y., Dec. 24, 1902.

WAX PRODUCTION.

Its Honey Cost, and Methods by Which it May Be Ascertained.

(Adrian Getaz).

HOW many pounds of honey do the bees use to produce one pound of wax?

That is the question which has been agitated in the Revue Internationale and in the Apiculteur for some time, chiefly by Messrs. Sylviac and Alanjean.

Experiments have also been made to determine the ratio. All were made in the same manner. A swarm either natural or artificial; I mean by "artificial" that which we would call "shaken swarm," was weighed and hived. Three days later, the combs built were cut out and weighed.

The assumption is that during these three days, but little honey is brought in, since there is no place to store it, and it is supposed that what may be brought in, does not more than make up for what the bees need to sustain life. Therefore it may be assumed that what honey they had in their stomachs when the swarm issued, represents the quantity necessary to produce the amount of wax found at the end of three days.

The correctness of the above assumption has been contested. Quite a discussion has also arisen as to whether all the bees of the swarm took part in the production of the wax or not, since a portion of them are necessarily old bees. To this it has been answered that the distinction between nurse bees or wax-producing bees. and field bees is not real, and that in case of necessity, old and young bees can do whatever work may be necessary.

It has also been stated that the ratio between the honey consumed and the wax produced cannot be less than about two and a half, or thereabout. A pound of wax contains as much carbon as about two and a half pounds of ordinary honey; and, therefore, much honey, at least, is needed for the production of one pound of wax.

Unfortunately I have only a few scattered numbers of the above mentioned papers, and those containing the figures are missing. The only information I have is that it takes from three to six pounds of honey to produce one of wax, that is, according to this method of determining the ratio.

An exceptional case is given by Mr. Sylviac. A swarm of approximately ten thousand bees (estimated by their weight), built in three days 900 grams (nearly two pounds,) of wax.

Suppose that each of the bees secreted the same amount of wax every day during each of the three days, that would make three-hundredths of a gram per bee, per day. As such a condition is impossible, some of these bees must have secreted considerably more.

It might be well to state here that one American pound equals 452 1-2 grams.

In line with the above question, it might be well to investigate how much honey a bee eats simply to keep alive. Mr. Harroult has experimented on this question. He put (in November 1900) a certain quantity of bees in an observatory hive. That hive was in a warm room. The temperature during the day was from 60 degrees to 64 degrees Fahrenheit, and never below 48 degrees during the night. At first the hive was opened during the day. Quite a portion of the bees went back and carried away some of the honey given. A little pollen was brought in.

From November 17th to the 9th of December the hive remained closed. The total weight November 17th, hive, bees and honey was 850 grams to which should be added 30 grams of honey given December 5th. On December 9th no honey was left. The bees and hive weighed 793 grams, the hive without the bees, 734 grams, giving the weight of bees at 59 grams. The weight of 63 of these bees was found to be six and nineteen-one hundredths grams. Therefore the weight of one bee, something less than one-tenth of a gram. The honey consumed from November 17 to December 9th was then 880,—less than 793 grams for 22 days; which is very near four grams per day. The number of bees, very near 600. The amount of honey consumed daily by each bee, four six-hundredths or one one-hundred and fiftieth of a gram. That is one-fifteenth of the weight of the bee. A colony of bees weighing, say five pounds would then consume one-third of a pound of honey daily, merely to keep alive.

Knoxville, Tenn., Feb. 1, 1903.

SELLING EXTRACTED HONEY AT RETAIL.

The Subject Continued from February Number.

(W. W. McNeal).

As to the matter of labels for packages containing honey I deem it imperative that all honey sold by retail should thus be stamped with the name and address of the party who put it up for market. with his guarantee of purity. But I believe the term extracted is worse than superfluous when appearing on the labels. There are so many extracts of one kind or another for sale that the very first impression the interested public gets is misleading. The word seems to convey a different idea entirely from the one intended and the retailer is thus made to proclaim his goods to be an "extract" of honey, an extract of something,—anything in fact, but "pure bees' honey" as the common version puts it. Being so understood that the article is a manufactured one, its reputation is made bad and a ban is put upon the genuine article by the seemingly harmless little statement, "pure extracted honey."

The fact that the patrons of the bee hive, generally expect pure honey to show no tendency to granulate, all persons putting it up for retail will find their interests best served by adopting measures to keep it in a clear liquid state. By heating the honey and sealing it up while hot, granulation is practically overcome. For my own personal likes I would have extracted honey thoroughly candied. Its luscious sweetness when eaten with light flaky biscuit is then above comparison with anything we know of. I speak of the best grades only as inferior honey is poor eating at any time. But, since the natural trend of the wants of the honey-eating public seems to be for honey in a pure liquid state when it is taken out of the comb, I would advise a somewhat strict conformity to the prevailing conditions rather than by education seek to establish a demand for granulated honey which in many instances is not only inferior but must be sold at a figure considerably higher than granulated sugar.

From the view point of my little perch, the different associations might help the sales of liquid honey by adopting a package best suited to the markets of their own section, and then, by an order to the factory guaranteeing a given number of a large denomination, place the jars in the hands of their respective members at a very moderate price. The package should be attractive and a rapid filler also. A bottle sealed with a cork and then waxed will probably preserve the delicate flavor of honey better than a jar that closes by means of a cap and a rubber ring. But the work of sealing them is so tedious; besides, the purchaser rarely values a bottle so highly as he does a jar. The "Tip-Top" jar, holding one pound, is really the most practical of any that have come under my notice. This jar is bound to supercede the No. 25 jar—if the former preserves honey in a liquid state as well as the latter. The Tip Top jars are delightfully rapid in the matter of sealing and they are just as far ahead of the others just mentioned, in point of display. They look bigger and sell more readily than a squatty jar holding the same amount of honey. If this jar was reduced in size at the shoulder, making it uniform from the bottom to the neck but enough taller to retain its present capacity, the display would be still better and the sales of honey more frequent.

Jelly glasses holding a half pound of honey are very popular with a large class of consumers who want "just a little" honey, but want that little often. Some styles of these glasses are very pretty when empty but after being filled and neatly labeled are most catchy in appearance. Could we but have a package of this capacity, sealing as rapidly as the Tip-Top jars, though not exceeding the cost price of the jelly glasses, extracted honey would be moved in quantities more satisfactory to the trade. The retail price of honey in them being "only a dime!" a great deal of it would be used in the homes of the honest poor where children seldom have the pleasure of eating the sweets gleaned from the clover fields by the honey-bee.

Wheelersburg, O., Dec. 5, 1902.

CUBAN COMB HONEY.

How It Compares With the New England Product.

(Samuel W. Bridgham, 2nd).

I SAW it in the window of the grocery store as I was passing, and I immediately proceeded to buy a comb, and to ask where it came from.

It was the finest looking honey I ever saw in sections. As white as driven snow, nearly every cell capped clear to the wood, and remarkably free from stain of any kind, either on the comb or on the box. I picked out a section that had but five uncapped cells in it, and filled, as stated, clear to the wood, to take home as a sample.

That which I bought was part of a lot that was standing without any covering i. e. not in any carton, but on top of a pile of cartons from a Vermont apiary. The latter was in the ordinary section boxes, while that which I bought was in Danz. sections. I asked the clerk where it came from and he said "Vermont," whereupon I went at once to Bro. A. C. Miller in the hope of palming it off on him for local product, but the joke didn't work worth a cent. He is "a cleaner" on matters "apistical." What he doesn't know or find out about bees in some way or other isn't worth the knowing; so when I opened up the package, he said, "So you have got some of that Cuban honey, too." "Not much," said I, "that honey came from Vermont." But he replied, "They told me it came from Cuba."

Back I went to the store again, and the clerk asked the buyer, and came to me with the statement that Bro. Miller was right; and then I perambulated over to the aforesaid Bro. Miller's place of business, and we proceeded to discuss the merits thereof from the outside of the comb. Later I sampled it on some hot biscuits at home, said biscuits being made for the occasion.

There seems to be no question in regard to the magnificent appearance of this honey. Never has such beautiful comb been exhibited for sale in this city, for it surpasses in its texture and whiteness anything I ever saw.

The honey, however, is too sickish-sweet in comparison with our native product, and the flavor is rather more ethereal than material, (for lack of better words to express the comparison) to suit the taste of most of those who assisted in the demolishing of the comb I had.

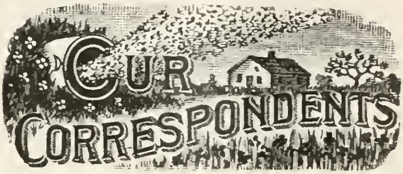
The taste of it was rather an aroma than a flavor, and the general idea is that it lacked "body." Of course tastes differ very much indeed, and I found several who liked this honey very much, but I do not think that it will displace our native product, in spite of its superfine appearance.

A day or two afterwards I procured as fine a comb of what I consider the best Vermont honey as I could find, and compared both kinds with our local product. The local honey and that from Vermont had identical characteristics, and both were superior to the Cuban product in what I call the "body" or the flavor as well as in firmness of comb, while the Cuban honey had much whiter comb and a far more subtle aroma.

The price at which it was sold tells a story of its own too—from four to five cents less per pound at retail than our native honey—nevertheless its price will aid in introducing honey to many who would not otherwise get it, and for those who like a honey with an aromatic, evasive and almost imperceptible flavor, it is most excellent.

Give me the home grown product every time; but I am glad to see the foreign honey in the market, for I think it will sell many pounds of that raised nearer home.

Providence, R. I., Jan. 26, 1903.



Grafton, Mass., Feb. 2, 1903.

Editor American Bee-Keeper:

I am very much interested in bee-keeping and an admirer of your paper. I wrote you an article some time ago advocating the good advantages of old New England as a place to keep bees. During the past season, although all admit it has been a poor year for bees, I took seventy-five pounds of comb honey from one colony and left half as much more for the bees during the long winter before them. Others report even better success. Our bees seem to be wintering all right, but it is the damp spring weather which is so disastrous to all bees in this section and no doubt it is the same everywhere.

The Worcester County Bee-Keepers' Association met last Saturday in Worcester, for the election of officers. Mr. Chas. E. Prouty was elected president and Mr. C. R. Russell secretary and treasurer. We have started a boom in our association, and hope to carry out all we have undertaken.

The first thing will be a banquet, and we hope to see all our bee-keeping friends in this county. We wish, Mr. Editor, you could drop in and see us on that occasion. We would treat you to New England honey, all right.

The next on our program will be some interesting speaker who will tell us how we can keep bees to better advantage in New England. Then we hope to have several out-door meetings during the summer with our brother bee-keepers which will add interest and instruction.

Yours very truly,

E. P. Goddard.

Lima, N. Y., Dec. 25, 1902.

Editor American Bee-Keeper:

I should like to ask a question relating to taking bees on shares: A having a larger number of colonies than he wishes to handle, and desiring to establish an apiary some distance from his home, B proposes to take the bees on shares; A to furnish all material—hives, foundation, bees, etc., and B to do all the work. What proportion of the honey crop and swarms ought B to receive for his share? Will some bee-keeper please answer through the American Bee-Keeper?

Respectfully yours,
J. Butler.

(Mr. James Heddon, in his book, "Success in Bee Culture," says: "The increase belongs to the apiary, always; and any system that gives a share of the increase to the laborer, will defeat itself and prove in the end damaging to both parties." Mr. Heddon has had extensive experience along this line, which has resulted in firmly established ideas as to plans that are both practicable and just to all parties concerned. Mr. Heddon's book was written eighteen years ago, and he is still quite largely engaged in bee-keeping. It is rather a note-worthy fact that at the very moment while the writer was considering Mr. Butlers' belated question, above given, Mr. Heddon walked into The Bee-Keeper office, and the question was submitted to him in person, in order to ascertain whether he had changed his mind in regard to the matter. He read the question and promptly replied: "There is but one sort of understanding that will fairly entitle B to any share of A's swarms, and that is the understanding that B is to run A out of the business in a short time. The natural increase is necessary to off-set the death rate, and the swarms should and must always be considered as belonging exclusively to the apiary, as much as the original colonies. If the apiary is to be maintained, the natural increase, or swarms, must be kept in the apiary. B is entitled, of course, to his share of the honey produced by the swarms, but the swarms themselves, should not be separated therefrom, as they are needed to keep up the honey-producing capacity of the apiary." Mr. H. further says that, the honey crop should be equally divided between A and B, and that B should be required to stand the expenses of packages necessary to market his portion of the crop, whether barrels, cans, or sections and cases; and in case of producing comb honey, also the cost of his proportion of the surplus foundation consumed in its production In order to secure the largest possible returns in honey, it is important that increase, or division of colonies by any means, should be discouraged. It is therefore quite obvious that some arrangement which gives the manipulator or laborer only a share of the honey, would be more likely to terminate in general satisfaction, than would a plan authorizing him to claim a share of all colonies in excess of the original number. His proportion of the crop, would, of course, necessarily need to be greater than if he were to become part owner of the swarms. His compensation would not necessarily be lessened, but it would come from a more practicable source, and in a more satisfactory way.—Editor).

Cienfuegos, Cuba, Feb. 3, 1903.

Dear Mr. Hill·

I see by the December number of The Bee-Keeper that Mr. John Hardscrabble is inclined to worry about my having established an apiary in Hell Valley which he seems to regard as a very bad place. But if Mr. Hardscrabble could but have a glance at Valle del Infierno, he would doubtless change his mind; for this beautiful spot is located in the uplands—in the very heart of the mountains—some 800 or 900 feet above the sea level, and in a bee-line, 25 miles southeast from Cienfuegos. The valley is four to five miles in width, entirely surrounded by high mountains upon which ever grow tall trees of the wild forest, and are green throughout the year. Several extensive coffee plantations are cultivated in the valley, which is traversed by the cool, clear waters of the Matagua river, which makes the wonderful fall of over 300 feet. Here the heat never troubles us. In the winter time—at this very season—it is cold, descending now and then nearly to the freezing point.

I am very busy now; though January

gave me but little honey; but now the hives are full, and 1,000 to 1,500 gallons should be gathered during February. Our honey now is all from the coffee, mango and pomarosa trees, which are in full bloom, and the bees are frantically busy. Last month I sent 2,000 gallons of honey in five-gallon cans—two in a case—to Hamburg; put on board at 46 cents a gallon.

With best wishes for yourself and the American Bee-Keeper, I remain,

Fraternally yours,
Dr. J. B. Pons.

Hallowell, Me., Feb. 2, 1903.

American Bee-Keeper:

I have a hive of bees which I think has pickled brood. The brood seems to die all the way from just before capping the cells until the bee is developed and trying to crawl out of the cell. There is no odor; neither is it ropy. The bees remove it after a few days. Last August I shook them onto frames of foundation, but left on the sections, and it was just as bad afterwards. The old hive I gave a queen-cell, and just before the queen begun to lay, I put them on foundation, and all was right. What I am anxious to know is whether there is any way that I can save the old combs. I will have 16 fine ones, and nine of them heavy with pollen and honey. I can't find anything in my books or papers that gives me any information in regard to it. The diseased colony is wintering finely, so far.

Yours truly,
Albin N. Lehr.

(It is exceedingly difficult for us to arrive at any definite conclusions as to the cause of the pupae dying in the manner stated; though it is not very improbable that you have correctly diagnosed the trouble. In the event of your being satisfied that the disease is nothing more malignant than pickled brood, we should not hesitate to make use of the combs. It might be prudent, however, to extract the honey and give the combs and remaining pollen a very thorough sun-bath. That is, expose both sides of the combs to sunshine for a considerable length of time before placing bees upon them. Such treatment, we imagine, would tend to cleanse the combs and kill the fungi responsible for the malady. Having such a few combs from infected colonies, will enable you to conduct some experiments along this line, which need not be expensive, yet very useful to yourself and others, as well as a source of satisfaction.—Editor).

THE Bee-Keeping World

AUSTRALIA.

Mr. Colbourne, editor of Farm, Bee and Poultry Review, writes me under date Dec. 24, 1902: "Australia has passed through the most severe drouth the white man has ever experienced. In some parts, not 200 miles from me, there are children seven years old, who never saw it rain until a month ago. We have now had good rains, so I hope the old man's drouth has broken up. This is rather a poor season for honey almost all over Australia. I have not been able to extract an ounce as yet, although it is nearly mid-summer here now."

ENGLAND.

For the past three years the English government has had some investigations made in India as to whether Apis dorsata was suitable for importation. After carefully studying all the reports

Mr. H. Harris has come to the conclusion that any experimenting with Apis dorsata might as well be dropped as an unprofitable project. The northern part of India, it is said, harbors honey bees closely related to our own, but no case of crossing with Apis dorsata has come to the notice of anyone. It seems therefore probable that efforts made by man to accomplish this object would result in failure.—Heberly, in Deutsche Ill. Bztg.

SWITZERLAND.

Prof. E. Keller of Zurich recntly made an autopsy of a peculiar year-old-queen. This queen had been in a normal condition during the first period of her life, but after enduring the winter, all at once, in April laid no more eggs. The microscope showed her ovaries to be diseased or degenerated. There were no eggs present and the spermatheca was empty. A parasite was discovered within the queen between the alimentary canal and the reproductive organ which led the professor to suppose this to have been the cause of the queen's failing at an early age.—Schweiz-Leztg.

BRAZIL.

The inventor of the queen excluder, Mr. A. Hannemann, has a lengthy article in the Bienenvater, Vienna. It appears from this that even in Brazil there are poor honey seasons, for he says, that in one season from 80 to 90 per cent. of all bees starved. He himself saved his bees by feeding his reserve honey and 750 kilograms of sugar. Usually the seasons are good in South Brazil. The two weak, dragged-out colonies Mr. H. brought with him across the water in 1855 increased during the first season to 28 colonies. The second year he commenced with 23 colonies and increased them to 250. Bees seem to be given to swarming in South Brazil, and his management aims to make the best use of the swarms. His giant hives, holding from 12 to 20 swarms with queens all caged, I have described before on these pages. Mr. H.'s object in keeping the large number of bees is to produce chunk honey and extracted honey. Formerly it used to be strained honey. It seems the extractor has found its way even into Mr. Hannemann's yard. Late years Mr. H. has also adopted more practical hives than years ago, when he had to resort to the knife to obtain his honey. The L. hive seems to be in greater favor with him than formerly, when it excited his ire. He now storifies. This is gratifying to me; as I had occasion many years ago to cross swords—pens—with him. Hannemann believes in renewing queens often and says, it seems to him that the Italian bee is shorter-lived than the black bee.

RUSSIA.

Wurth says in Die Biene it has been ascertained that bees may endure confinement for eight months without becoming diseased. It is a common practice in Russia, he claims, to keep colonied buried in the ground for seven months during winter.

HOLLAND.

An effort is being made to induce the government in Holland to put the teachers in a position to keep bees; in other words, furnish them the bees, on the grounds that they are best fitted for the bee-keeping pursuit.

GERMANY.

The Rhein. Bztg. has figured out that the bottoms of sixty bee feet measure over one square centimeter of surface, and that ten bees could hold in suspense a weight of two kilograms.

The transferring of larvae was the invention of the German bee-master, Mehring, but American bee-masters have made a science of it and have brought it to perfection. While Mehring emptied a natural built cell, thus preparing it for the reception of a selected larva, the American bee-masters make their queen cells or cups artificially, stock them with royal food and larvae, or even eggs. This American method is beginning to become recognized as of value by our friends. Rev. Klein describes it in Deutsche Bzcht. and gives credit to America.

The following would be considered too risky by the careful bee-keeper: "Queen bees will be readily accepted by a queenless colony, if the cage containing the queen is first immersed in cold water. A queen thus treated becomes very quiet, it is asid in Rhein. Bztg.

R. Spiegler, Saxony, has compounded a liniment or salve from bee-glue, named Propolisin. It is recommended as a family medicine, excellent in case of scalds, burns, cuts, boils and skin diseases. He will send samples for the postage. I have sent for it.

To test the purity of beeswax, drop a little piece of the wax into a testing tube (glass) filled with benzine. If pure the wax will all disolve, if adulterated, some parts will remain.—Gavenhorst's Ill. Bztg.

Die Biene & Thre Zucht reports an effective introduction of bees thus: A tavern-keeper in the Altmark was unable to clear his apartments after a dance, as a certain number of the guests would not give up their game. He finally used a little strategy, went out into his back yard and when he returned brought with him a little box containing some bees which he liberated. There was a hustling and the room was vacated.

F. Greiner.

A FANTASTIC NOTION.

Riding through a country part of Pennsylvania recently, a man noticed a beehive with a black ribbon wound around it. "That is a singular way of holding a hive together," he remarked. "Why don't they use a piece of rope?"

"That isn't to hold the hive together," returned his companion, a woman who had lived most of her life in the country. "There has been a death in the family, and the beehive has been put in mourning."

"Dead bees?"

"No. A dead man, woman or child in the family."

"Well, why on earth do they put that black ribbon on the hive? Do they bind crape on the horns of the family cow, or tie up the plow horses' tails with it, when anybody dies?"

"You may laugh,' returned the woman; "but it is a common thing in New England where people have bechives to put black around them when somebody in the family dies. They believe the bees will fly away from the hive and go to some other place if they are not notified of this domestic sorrow in this way. You know bees are very punctilious," she added convincingly.

"And I know New Englanders have horse sense," he rejoined drily. "You'd better send this point in apiculture to our friend Maeterlinck.—Philadelphia Public Ledger.

LITERARY NOTES.

The Youth's Companion for 1903 is one of the most interesting volumes of this charming weekly that we have known. The Companion has been published continuously for over three-quarters of a century, and it does seem that each year's numbers grow better Men and women prominent in every walk of life are contributing to the 1903 volume. The special features which render this volume of especial interest in the home circle are: Serial stories, each a book in itself, reflecting American life in the home, camp and field. Ffty special articles are contributed by famous statesmen, travelers, scientists and essayists. The editorials, on important public and domestic questions, are thoughtful and timely. Numerous short stories by the best living story-writers, of character, adventure and humor. The thousand short notes on current events, and discoveries in the field of science and natural history, are a feature which invariably instructs and entertains; while the endless array of anecdotes, bright and amusing, items of strange and curious knowledge, poems and sketches, captivate both old and young. The American Bee-Keeper has pleasure in commending The Companion to those of its readers who appreciate sparkling and wholesome literature about the family hearthstone.

The fountains of the eternally virginal spring in every human heart, and keep the world of new emotions perennially fresh and beautiful; and to each of us is given the right not only to possess them, but the obligation to cherish them.—From "My Old Maid's Corner," The Century, February, 1903.

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Editorial

It is said by certain manufacturers of tobacco that Florida mangrove honey does not possess the flavor necessary to their business. We think ourselves that the consumer would probably relish it better spread upon hot cakes or biscuits.

The Pacific Bee Journal has failed to appear at this office for several months. Inquiry by letter fails to elicit any explanation as to the cause.

At this writing, Feb. 17, bees are in better condition in the vicinity of Ft. Pierce than for several years past, at the same season. Honey has been coming quite freely, and breeding is being carried on quite extensively.

The Australian Farm, Bee and Poultry Review says "The long-tongued bee craze appears to be dying a natural death. We wonder what will be the next craze for American queen breeders to put forth." At this writing, the American queen breeder's stock in trade runs heavily to "umbilical cord."

The Bee-Keeper office is being honored just now with daily visits from Mr. James Heddon, the veteran apiarist, inventor and author, of Dowagiac, Mich., who, in company with his urbane son "Billy," of Chicago, arrived in Florida on the 12th ultimo. The Messrs. Heddon are enthusiastic and distinguished sportsmen, as well as expert apiarists, and will probably fit out a commodious yacht at this point and do the coast in true sportsman style.

The Bee-Keepers' Review for February makes a strong appeal to bee-keepers for neatness and order in the apiary and honey-house. Editor Hutchinson directs attention to the fact that a profitable business is never conducted in a slovenly manner. Not that neatness is the chief cause of success, but that order and a disposition which takes cognizance of cleanliness and beauty are traits of character usually well developed in the man otherwise fitted to achieve success, and are an index of his possession of the right stuff to succeed in any business. After reading Editor Hutchinson's remarks, Mr. James Heddon, who is sojourning with us, wrote with pencil upon the margin of the page, "Order amounts to a perpetual invoice."

The editor of Gleanings says he does not believe there is much choice between queens put out by our old breeders who have had years of experience in the business. Notwithstanding the broad claims of superiority for their own stock, and the general condemnation of the product of others, which is being indulged in by certain breeders at this time, there is very good reason to believe that Editor Root is quite correct in his surmise. Some of the poorest queens that we have ever bought, came from those who do the loudest talking about their superior strains and methods. Unfortunately, mere assertions do not materially effect the quality of stock in this line. It is the practical test that tells the story, and the bee-keeper who invests his cash in queens is loth to accept verbal or written claims instead of intrinsic merit.

The Rocky Mountain Bee Journal says of the Cuban bell flower: "It yields a light, mild-flavored honey that is in every way fitted to successfully compete with the best products of the states. The honey resources of this rich tropical isle are just beginning to be exploited in characteristic Yankee style and the production will increase with amazing rapidity in the next few years." Truer words were never spoken. The Cuban product, from this source, is "number one," and the business of production is fast coming into the hands of capable and enterprising apiarists. The result may be easily foreseen. Editor Morehouse says commercial co-operation is the remedy to apply if this competition is to be forestalled, and he is doubtless correct.

Dr. O. M. Blanton, of Greenville, Miss., one of the progressive veterans who is now in his 75th year, and in excellent health, writes us that he is making preparations to increase his 195 colonies during the present year to 400. Speaking of his locality (the Missisipi Delta.) and conditions, the doctor writes: "I have all the different strains of bees, but am at a loss as to which are the best honey gatherers. This country is a very good locality for bee-keepers, as we never have an entire failure, and often secure very large yields. Strange to say, there are but six bee-keepers in this county (Washington), and three of these are negroes who have taken it up after working with whites; and with an average of 60 colonies each, they bring to this market about 20 barrels of honey, in all. We are introducing into this county sweet clover and other honey plants, as most of the honey-producing forest trees, vines, etc., are being cut away for the cultivation of cotton; though we find the cotton bloom excellent for honey." Here is an example of the kind of business enthusiasm that wins success.

Writing from Chicago, under date of Jan. 9, R. A. Burnett & Co., a large concern which deals in honey, has this to say: "The demand for honey is not more than usual; hence, stocks are sufficient, especially as Cuba has now comb honey on this market. This is a new source of supply, and is a factor that must be reckoned with, as it obviates the necessity of laying in a stock during the summer and autumn to draw from in the winter and spring months." Carry the news to Morrison. Last June Mr. Morrison hooted the idea that West Indian honey was to become a "factor" in American markets. Editor Root approved his view, and Mr. R. A. Burnett, whose firm is quoted above, took occasion to corroborate Mr. Root's observations. Mr. Root then followed up Mr. Burnett's testimony in this wise: "I do not think the bee-keepers of the United States need to worry a particle over any possible effect that Cuban honey may have on American markets." Whether we worry or not, the fact presents itself that the tropics give promise of the strongest competition with which the American producer of the future will have to contend.

One of the young queen breeders, just becoming known to the bee-keeping world, recently informed us that his firm's greatest difficulty was to keep pace with the orders for its stock, and this rush of business was a result of advertising but periodically in but one of the apiarian journals. He was perfectly satisfied with the volume of business coming his way, and could foresee naught but a disastrous flood of orders in case of extending his advertising. It must, indeed, be pleasant to have one's business ambition so fully gratified; but is it not exceedingly unfortunate that such stock—stock for which the world fairly clamors—should be controlled by persons whose ambition finds such complete gratification in two or three hundred nuclei? No Schwab or Morgan blood in this firm, verily. In it lies no hope for the University of Chicago. Those who seek endowment of public libraries must continue to look for such to those who have developed superiority in armor-plate, and not in queen bees. What a pity a mere antipathy to publicity should preclude the achievement of so much good, and thwart such a noble example of the strenuous life.

Many and earnest are the commendations we have received from bee-keepers for the stand we have taken against the quoting of inferior honey as "Southern." One correspondent believes that the use of the word in quotations, as it has been used by some, affords the dealer an excellent method of disposing of the nation's dirty, sour, good-for-nothing "honey," at the expense of the reputation of but one-quarter thereof. There may be some truth in this assumption; but so far as Mr. Muth is concerned, we do not now, nor have we at any time, believed that he would willfully wrong the bee-keepers in any quarter of the country. Quite an extended correspondence with Mr. Muth himself in regard to the matter, convinces us that his firm desires to do only that which is right and fair with the producers everywhere. The difficulty has been in his inability to fully appreciate the damage that the practice is doing the progressive producers of the South. We hopefully anticipate a conclusive announcement from Mr. Muth on this point, in time for our next issue; and believe bee-keepers will find therein the evidence of his readiness to change his mind, when shown his error.

Professor Fred W. Mally and Mr. Wilmon Newell have issued a very interesting report of the past season's work in the experimental apiary of the Agricultural and Mechanical College of Texas, "together with practical suggestions in modern methods of bee-keeping as applied to Texas conditions." The Report comprises 53 pages and presents much of interest to the general student of apiculture. Statistics compiled by Prof. Mally place the valuation of Texas apiculture in 1900 at $2,153,225.20. Mr. Newell, as Prof. Mally's assistant, is conducting operations at the experimental apiary with commendable enthusiasm and energy, and we have been much interested in looking over his report. It's a poor book, though, that will not afford its reader one smile. Here is where we found ours, on page 52: "Upon bee culture there are a number of reliable text-books, adapted to the beginner in about the order named: Root, 'A B C of Bee Culture;' Maeterlinck, 'The Life of the Bee;' Cook, 'Manual of the Apiary;' Dadant, 'Langstroth on the Honey Bee;' Cheshire, 'Anatomy, Physiology and Floral Relations of the Hive Bee;' Morley, 'The Honey Makers;' L. C. Root, 'Quinby's 'New Bee-Keeping,' and Doolittle, 'Scientific Queen Rearing.' "

"RAMBLER" IS NO MORE.

Mr. John H. Martin, better known as "Rambler," under which name he has written extensively for Gleanings, recently died in Cuba, where he has been conducting apicultural operations since November, 1901. The loss which the fraternity has sustained through Mr. Martin's death, is so fittingly expressed in a private letter from A. C. Miller, that we can do no better than present Mr. Miller's words, as follows:

"I learned yesterday by Gleanings of Rambler's death, and it came as a painful shock. I knew him well and we have corresponded for years. Kindly, genial, gentle-spirited, large-hearted and always tolerant of the failings of others, believing that all persons posses some good, and looking for that and not for their shortcomings, in his quiet way he steadily tried to make life more worth the living. Broad in his own religious belief, trusting implicitly in the goodness and wisdom of his Creator, his was a quiet, practical, workaday Christianity. Full of dry wit and gentle satire he made us smile while showing us our foibles. The bee-keeping world can ill spare such as he and to those of us who were so fortunate as to be called his friends, the loss is irreparable.

Following so closely as it did after the death of genial Dr. Mason, his passing is even heavier to bear. Two such men taken from us leaves a void which we cannot fill even should we care to try."

USE ONLY IF NECESSARY—QUEEN CELLS.

Their Presence may not Always Indicate Queenlessness.

It has long been considered the orthodox thing to say that the building of queen cells, or the toleration of their presence, was a sure indication of queenlessness, but Dr. Miller, in Gleanings, brings up a point upon which I believe there has been but little, if any, reported experience. He says:

"To decide whether a virgin queen is present, a common way is to give a frame of eggs and young brood, with the understanding that, if a young queen is present, no queen-cells will be started. It is pretty safe to follow the rule that, if no queen-cells are started, there is a queen present; but I have ceased to put faith in the opposite rule, that the presence of cells shows the absence of any queen; for too often cells will be started, even with a good virgin queen present. It's a good thing, all the same, to give the young brood. (You are just right. The presence of cells under some circumstances does not necessarily indicate the absence of a queen; but they may show that the old queen-mother is playing out, or they may show the fact that the hive was queenless at one time, and that a virgin present for some reason had not seen fit to destroy the cells and thus put out of the way any possible rival.—Ed.)"

In my experience as a queen breeder, I have often noticed this same point that the doctor brings up. Suppose that a nucleus has been queenless three or four days, and then a virgin queen is given, and the cells they have started are left undisturbed, they are quite likely to be left, undestroyed by the bees for sevral days. If a queen is given to a nucleus at the same time that the laying queen is removed, or before the bees have started any queen cells, it is very seldom that cells will be started, but after they are once started the bees seem loth to destroy them, or to allow the queen to do so, until she has actually been fertilized. It seems strange that they should do this, when they will allow the first-hatched queen of a batch of cells that they have built themselves, to go on and destroy all of the other cells, and even help her to do it.

When I go to a nucleus to introduce a virgin queen, or to put in a cell, and find cells started, I always destroy them, because, unless the queen is lost, they will seldom start others, and, if I do find them starting others I can feel that it is quite likely that the queen is lost, and govern myself accordingly.—Bee-Keepers' Review.

EVERY BEE DEAD.

Worcester, Mass., Jan. 27, 1903.

Such would be your inference if you wer to judge by the amount of enthusiasm shown by the Worcester, (Mass.) Bee-Keepers' Association during the year 1902. But I am pleased to state that the association woke up Jan. 24, 1903, elected officers and laid plans for 1903, which if carried out, will add an impetus to bee-keeping in this vicinity. The March meeting will be devoted to the discussion of Fruit Tree Spraying in Connection with Bee-Keeping. For one of our spring meetings some of our lady members are going to be asked to prepare papers. A banquet is in the works, to be given separately or in connection with the Market Gardeners' Association. The reports that came in from the bee-keepers themselves were on the whole about as usual; some reporting a large amount of surplus, others having practically none. There has been some adulterated honey put on the local market; but more of this at another time. There is a very bright prospect for something doing along the "Bee-Line" this year. Next month figures will be ready to show how many colonies are kept within the limits of a city of 125,000 inhabitants and the number represented by our association.

BLACK HONEY.

Considerable discussion was stirred up at the regular monthly meeting of the Worcester County Bee-Keepers' Association, Feb. 14, by samples of black honey. The boxes were not filled out, giving one an idea that the honey was gathered late. Some was so black that President C. E. Prouty, of Auburn, suggested that the bees must have worked in districts where soft coal was freely used. At any rate, none of the members could explain the cause of it although some were bee-keepers of nearly fifty years' duration.

In two cases it was shown that the honey was gathered about the time blackberries were ripe. This thought had many followers, for the honey had every appearance of being "fruit honey." Its taste was not agreeable, for there was some flavor of poor molasses in it. One of the exhibitors who had a large quantity of it refused to eat it himself or allow his family to eat it. Another theory that had many backers was that of honey dew from maple and oak trees.

Both sides acknowledged that the flowers had disappeared, and during the gathering of this black honey the bees were exceptionally busy.

F. E. Drake, of East Brookfield, showed samples of extracted honey in almost as many colors as those in the rainbow, running from very light golden, to almost black, a very curious contrast. If any readers of the American Bee-Keeper have had a similar experience, we should be pleased to hear from them, direct or through this paper.

C. R. Russell.

Worcester, Mass., Feb. 17, 1903.

Clifton Springs, N. Y., Feb. 17, 1903.

Editor American Bee-Keeper,
Fort Pierce, Fla.

Dear Sir:—

N. E. France, Platteville, Wis., General Manager and Treasurer elect of the National Bee-Keepers' Association, has qualified by furnishing a bond as required by the Constitution of said Association. He is, therefore, duly qalified to perform the duties of such office.

Very respectfully,
W. F. Marks,
Chairman Board of Directors.

IS SWEET CLOVER GOOD FOR PASTURE?

Some report that cattle and horses will not touch it, others that they will eat it greedily. Both are no doubt correct; at least those who say cattle will not touch it are so far correct that cattle unacquainted with it must learn to like it. But that argument might apply to corn as a feed for stock, for it is said that cattle which grow up without ever having had a taste of Indian corn must learn to like it. Look at the cultivated taste of a cow for "slops." The family bossy will eat a mixture of dishwater and almost anything else, while a cow that has never had anything besides green feed or grain will sniff at it in disdain.

An editorial in the Bee-Keepers' Review has this upon the subject:

Sweet clover as a pasture has been condemned by some people, but down in Lenawee County, Mich., I recently saw a striking illustration of the manner in which stock will eat it down. Mr. C. A. Huff, of that county, seeded down 12 acres to sweet clover. By the way, he secured an excellent catch by sowing the seed in the spring with oats. One portion of the field was fenced off and rented to a neighbor, who put in plenty of stock, and they kept it chopped down close. Mr. Huff put in only a small amount of stock, not enough to keep the clover down, and it grew as high as a man's head nearly all over his part of the field.

Here comes a note from Dr. Miller bearing in the same direction:

"At one time one or both of the Dadants said that sweet clover would not be allowed to grow if cattle were allowed access to it when young. I don't know that I ever said so out loud, but I thought that was putting the case a little strong. For the unkindness of that thought toward such reliable men I have been personally punished. Last year I turned my horses into a field which contained a patch of sweet clover some rods in extent. It was luxurious in its second year's growth. I wanted it to re-seed the ground, but those horses kept it eaten down so closely that scarcely a seed was allowed to mature, and whatever seed may have fallen and started into growth this year, not a thing has been allowed to continue in growth, and the place is now bare of sweet clover. Last year was an exceedingly dry season and the pasture a little short, or the case might not have been so bad. This year has been as wet as last was dry, and the horses have had more pasture than they could manage, so another field with a good start of sweet clover has been cropped by the horses in moderation."—American Bee Journal.

HONEY AND BEESWAX MARKET.

WASHINGTON GRADING RULES.

Fancy.—All sections to be well filled, combs straight, of even thickness and firmly attached to all four sides; both wood and comb unsoiled by travel stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy white," "No. 1, dark," etc.

Kansas City, Mo., Feb. 9.—The honey supply is light, with demand good. We quote comb honey, 12 to 16 cents. Extracted, 6 to 7 cents. Good demand for beeswax at 30 cents a pound. Supply light.—Hamblin & Sappington.

New York, Feb. 9.—Trade in honey very quiet at present. Supply is more than demand. We quote fancy comb, 15 cents, No. 1, 13 to 14 cents. Extracted, 5 to 8 1-2 cents. There is a good demand for beeswax at 29 to 32 cents, with short supply.—Francis H. Leggett & Co.

Chicago, Feb. 9.—The market is in rather an unsettled state, the offerings of late having been numerous, and there is a tendency toward lower prices, owing to the supply being much larger than expected at this season. The fancy grades of white will sell at 15 to 16 cents per pound, but anything below this grade is difficult to place at above 10 to 12 cents. Extracted honey is also easy with the best grades white obtainable at 7 to 8 cents, and ambers at 6 to 7 cents. Beeswax steady at 30 cents upon arrival.—R. A. Burnett & Co.

Buffalo, N. Y., Jan. 12.—The honey market at present is quiet but very firm on all grades. Strictly fancy white comb, 16 to 7 cents, and occasionally 18 cents. Other grades, 12 to 15 cents. Receipts are very light and are likely to remain so. Prices should be well maintained the balance of the season. Moderate demand for small lots of extracted at from 6 to 8 cents. Beeswax, 25 to 33, as to quality.—Batterson & Co.

Cincinnati, Jan. 10.—The demand for all kinds of honey has fallen off considerable in the last few weeks, owing to the many other sweets offered at this season of the year. Lower prices are no inducement to increase the consumption, as the demand is not there, and will not be until about the end of the month; consequently it is folly to offer at lower prices. We quote amber extracted in barrels at 5 3-4-6 1-2 cents; white clover and basswood 8-9 1-2 cents; fancy white comb honey 16-17 cents. Lower grades hard to sell at any price. Beeswax firm at 29-30 cents.—The Fred W. Muth Co.

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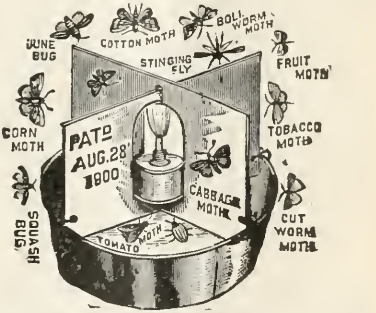

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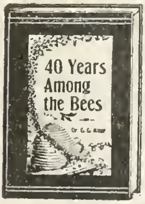

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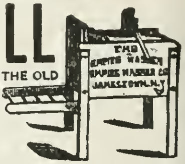

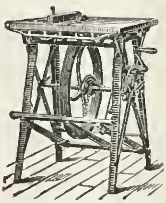

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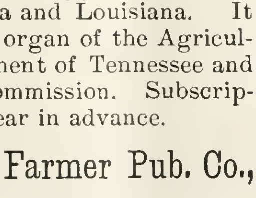

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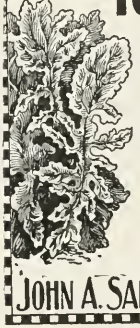

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THE AMERICAN BEE-KEEPER

Published Monthly by The W. T. Falconer Mfg. Co.

Vol. XIII APRIL, 1903 No. 4

Successful Queen-Rearing.

(Arthur C. Miller).

IN THE BEE-KEEPER for February, Mr. Atwater in referring to the cell cup plan of queen rearing says: "Mr. Alley and 'his armed knight' (A. C. M.) cannot alter the fact that queens properly reared by the cell cup plan are as good as any." That word "properly" tells the story. In the same issue Mr. Harris says "Queen rearing has not been so generally discussed by the main body of queen breeders as might have been expected." If we may judge from what some of them have said they evidently know little of the laws governing it.

It is exceedingly difficult to get into the short space of a magazine article all things appertaining to the writer's view of the subject under consideration and I now see wherein I have led others astray as to my views on queen rearing. I was writing chiefly for the benefit of the novice and the busy man, not for the professional queen raiser. The latter as a rule keeps his methods out of print and also he sticks to his accustomed way in preference to new ones. I will agree with Mr. Atwater that queens when "properly" reared in cell cups are as good as any. My contention is that a great mass of the bee-keepers have neither the knowledge of what is proper nor the ability and patience necessary to make a success of that plan, and that for another large class it calls for too much time and bother. I have used it enough to know, and I have used about every known plan, and for simplicity, economy and speed nothing is ahead of the Alley plan. Unfortunately Mr. Alley's first book was not as lucid as desirable and it was to make his system more plain that I undertook writing about it. To be sure of my ground I visited his apiary several times, and this, together with my own experience of many years seems a fair basis for reasonably accurate judgment. I have studied bee-keeping both here and on the Pacific slope and from Maine to South Carolina, so I am not entirely ignorant of conditions of different localities.

In what follows I shall endeavor to show the WHY of things, not simply the methods, and to avoid misunderstanding let it be noted that I am not assailing the cell cup plan for those who have the skill and time to use it; my warning against it being for those who look upon it as a sure source of perfect queens just because "cell cups" are used. It would perhaps surprise Mr. Atwater to know how many persons so view it. Farther let me say that I am under no obligation to Mr. Alley, nor do I in any way receive compensation from him.

I believe it is generally conceded that the best queens are ordinarily reared at that season of the year when increase (swarming) usually occurs, and certainly they are more easily reared then. There must be a reason for this, and if we can find it, it will materially assist us in so shaping our methods when rearing queens "out of season" as to most nearly approach the normal conditions. At "swarming time" colonies are overflowing with bees; young bees (nurses) are superabundant; combs are loaded with stores of honey and pollen; field bees are busy bringing in more, and temperature and humidity are high. These two latter items should receive special attention, and I cannot do better than quote from Cowan's "Honey Bee." On page 60, quoting Newport, he says "the temperature of the brood nest in the swarming season averages 96 degrees, while in August it is seldom over 80 degrees or perhaps 86 degrees, even in the middle of the day when outer temperature is often more than 78 degrees. He then proceeds to give the scientific reasons therefor. At swarming time the air of the hive is saturated with moisture, a matter almost never alluded to as a requisite for successful queen rearing, whereas it is one of the essentials.

It is due to such causes as above that Dr. Gallup's "rousing colonies" produce fine queens, not to any supposed "umbilical cord," the latter being merely the last "cast" of the larva with its silken attachments.

Stating the essentials another way, they are, sufficient nurse bees, eggs or larvae under three days from the egg, and food. Sufficient nurses may be explained as enough to fill the chamber in which they are to build the cells. These nurses must be young bees and under the customary artificial conditions the presence of old bees is a detriment, particularly so during a dearth of natural pasturage, as they are too fond of "pap."

Young bees are the sine qua non of successful queen rearing, without them it is impossible to rear good queens. Here is an illustration: Last summer I took a hive containing ten Langstroth combs, some four or five of which were filled with honey and pollen, packed it with field bees from the best cell building stock I had, gave them eggs from a queen of the first grade, and to make the conditions still more favorable I kept them supplied with syrup even though nectar was being gathered. They built seven fine great cells, but not one queen of the lot was worth the trouble of killing. This is negative evidence. The positive side is well shown by the Alley nuclei. Here are little colonies in hives of about five inches cube; they are overflowing with young bees, few or no old bees are present. They are never without food in the feeder, the opening of which is within the hive, and thus aids in maintaining a humid atmosphere. These colonies are used for caring for young queens until they are laying and sold. Sometimes the replacing of a queen is overlooked and then they proceed to raise one for themselves, building one, two or sometimes three cells. The conditions are practically normal, i. e. the hive is packed with bees; they can and do maintain a high temperature and humidity; food is plenty and the larvae are well fed. The resulting queens are as good as can be desired. I have seen a queen thus reared the mother of just such a rousing colony as Dr. Gallup claims is necessary to produce a queen capable of making and keeping it big.

The second essential, i. e. eggs or larvae under three days from the egg, is too well known to need explanation.

The third condition, i. e. food, is all too often forgotten, particularly the pollen part. It should receive special care.

Given a nurse force of young bees proportionate to size of chamber and season of year (climatic conditions,) with abundance of food, and the temperature and humidity will (within certain limits) take care of themselves.

From experiments I am satisfied that very few bees can feed a comparatively large number of larvae, so that a large nurse force is of value chiefly for its heat producing power. If the law of higher temperature of young animals than old ones applies to bees as well as to higher organizations we can readily see another advantage of a nurse force of young bees, and also we have further light on the cause of the higher temperature of the brood nest at swarming time than at others.

The absolute need of young nurse bees has been decided upon by Mr. Simpson, Mr. Pratt, Mr. Alley and myself, each independently of the other. But I am of the opinion and Mr. Simpson concurs with me in it, that the more nearly we approach the normal conditions (i. e. full colony at swarming time) the more uniformly successful we will be in producing serviceable queens. The beginner and small bee-keeper had better depend for cells on colonies just swarmed. There is as yet no evidence that he will fix or increase the swarming habit by so doing. For him who must raise a batch or two of queens out of season let him endeavor to fulfil the conditions I have enumerated and his chances of success will be good.

A word about artificial cell cups and I will close. Those made in a wooden base have just one advantage over cells built from Alley strips; they are more readily caged. It is a small matter obtained at the cost of much labor and time.

Providence, R. I., March 11, 1903.

Deep Frames for Good Wintering and Early Breeding,

(W. W. McNeal).

SAY WHAT you will about that "impractical" thing, the deep brood frame my observations impell me to add testimony in their favor for a cold-weather frame. I have watched this matter closely and fairly, and I am firm in the belief that wherever cold winters prevail bees thrive better on combs deeper than the standard or L. frame. The cluster is so compact that there is less of that criminal waste of bees on the outer combs which is apparent upon the arrival of each warm spell of weather when these little frozen bunches of bees are dislodged and carried out of the hive by the more fortunate inmates.

Were it not that bee-keepers presume so much on the completeness of the present mode of packing the hives at the top only, generally speaking, the advantages of deep frames would be more clearly demonstrated. A merely local packing of a deep-frame hive may be worse than none for it serves to increase the tendency on the part of the bees to climb up close to the warm packing material, thus endangering the life of the colony from starvation. When the hive is evenly packed or likewise exposed, the position of the cluster will be down near the entrance just where it should be. This is the natural order of the hive; the stores are then above the bees, and they climb up the combs no faster than the honey is consumed. The empty comb is right where it can be used for breeding purposes and the danger of starvation is avoided so long as there is honey in the hive.

In connection with this it might be well to consider briefly the subject of hive ventilation. It is clearly evident to all that the hive and combs must be kept dry or the colony will never survive the long, bitter cold of winter. But the best means of accomplishing this is not so easily arrived at. Perhaps there is no better way, if the apiary is small and the colonies short of stores, than to put each hive into a larger box, filling in with forest leaves or straw so that frost will never penetrate.

When this cannot be done, a super of chaff or leaves may be placed on top and an outer casing sufficiently large to telescope the brood-chamber being put on, the super-cover proper may then be removed from the hive, and a gentle upward ventilation will be established. The super-cover should never be left on the super for it would then defeat the purpose of the packing, causing it to become wet and destructive to the bees. The amount of packing material in the super should be in keeping with the protection afforded the sides of the hive by the casing or telescope cover, for reasons already mentioned.

In any instance where packing material is not easily obtainable but the colonies are rich in good ripe stores, they will get along fairly well by lifting the hive clear off the bottom board sustaining it by other means. The cover board must be sealed air tight allowing all ventilation to come from below. Of course the hive will be colder and consequently the bees will consume more honey; but a cold dry air won't hurt them so long as their stores are good and ripe.

This method is open to the objection of being conducive to robbing should there be several warm days in succession. And moreover if the stores are fall gathered I would not advise it for the large consumption of honey would bring on dysentery.

I would invite the attention of honey producers to this subject to the extent that a thorough and impartial test be made of the merits of brood frames deeper than the Langsworth. It is better, far better to rely upon strong colonies that have the ability to make honey in the good old-fashioned way than it is to keep small hives and frames that are easy to handle though the bees have been taught to suck up sweetened water from little wooden troughs.

Wheelersburg, Ohio, March 12, 1903.

Spring Losses.

(L. E. Kerr).

TO THE enthusiastic and wide-awake keeper of bees there can be no more critical period than that in which he is endeavoring to get his colonies, somewhat weak and demoralized from the ravages of winter, safely over to settled, warm weather. He knows, or ought to know, that every worker now is more valuable than a dozen will be in the course of a few weeks when all danger of dwindling is past and new honey and pollen is coming in plentifully, and he will let no opportunity pass to give his bees all the protection and aid that lies within his power.

It is a matter of history where whole apiaries have, after coming safely through the ordeal of winter, succumbed to the condition of things that comes about naturally during a cold and backward spring when they have not been properly prepared to withstand the greater ravages of those months. It would be safe to say that a strong colony, in a warm hive, with an abundance of the best honey, would pull through any kind of a spring, and come out in the best possible condition, if left entirely to themselves.

I have been experimenting, more or less, every spring since I first began keeping bees thirteen years ago, with foods calculated to stimulate the bees to rearing brood which would become mature bees in good time to take the place of the old ones which would be dying off. As far as inducing the bees to begin brood rearing goes I have been successful in this, but for every young bee added to a colony by spring feeding, two old ones will be lost by venturing out in the fields at a time when it is impossible for them to ever return to their hive. When left to themselves bees keep to their hives at such times and though they are a little slower to begin brood rearing they will ultimately outstrip those that have been fed.

It is imperative to not handle bees in the very early spring. Where a hive cover is pried loose at that season, those bees are left in a bad way to carry on brood rearing, if not, indeed, in a fair way to join the silent majority.

Hurricane, Ark., Feb. 15 1903.

Self Dependance—Winter Work.

(Bessie L. Putnam).

BEE-KEEPING, perhaps more than any other rural pursuit, tempts the amateur to depend upon some one else when the difficult times come. This may be pardoned in the beginner providing he shows a disposition to learn how and has the "nerve" to carry this knowledge into practical use. But the one who is afraid of bees and bound to remain afraid of them had better buy honey than bees; the purchase of the latter is pretty sure to render him an annoyance to his neighbor.

There comes to mind a man whose house had a room built in the chamber, after the old-fashioned plan, exclusively for bees, a hole being made in the outer wall for their exit. Seeing some swarms offered cheap at a public sale, he invested, having no idea of how to care for his new purchase and no inclination to learn. They were placed in their apartment and allowed to attend to their domestic affairs without being molested by any of the family. Finally it was discovered that they had accumulated a goodly store. A neighbor who was a practical bee-keeper was summoned, and spent a day trying to bring order out of chaos. For, as might be expected, the bees had fashioned their comb into all conceivable shapes and places. Much of their labor was wasted by not being properly directed in the beginning; much by not being attended to at the proper time.

Time passed, and the bees worked as before. The next year the same man was called to collect the season's store, not a member of the family having the courage to face the insect band. The result was as before,—there was a large percentage of waste on account of the neglect. But the most discouraging feature of the case was that the owner was no nearer to a position for bettering the condition of his little wards than he had been before. He did not even watch the methods of his employee. It may not be amiss to add that the practical bee-man now resides hundreds of miles away. The bees in that chamber are probably dead or running riot.

It is wise for the beginner to use all helps available. Books and bee journals are necessary, yet the help of a skilled workman if rightly used, is certainly not to be despised. To depend upon this, however, year after year, is no way to progress; and the one who is unwilling to take his chances on getting stung will never make a success of bee-keeping.

As independence in manipulation is essential, so self-reliance should be cultivated in regard to tools. It is very easy to get into the habit of borrowing. A bee veil is a small matter, and some beginners seem to consider it unnecessary to own it. Yet they are the very parties who must have it when occasion demands work with bees. It is scarcely worth while to invest in a smoker when one can borrow of a neighbor. Maybe it will be found convenient to keep it a few days until the new queen ordered arrives. But just a few days of course won't matter. Does Mr. Borrower ever stop to consider that his neighbor's bees may have the swarming fever at the same time? or there may be honey to remove? that the busy season in one colony is apt to be contagious? It is scarcely just to expect the large apiary to furnish implements for any protracted time to run the small one. If the beginner forms the habit of self-reliance he will suceed better. and will be more esteemed by his fellow workers.

Northern apiarists find comparatively little work at this season, yet there are some important features which can be much more profitably looked after before the rush of work. There are details which mean besides time when time is money, bringing with them profit or loss, as facilities for work are provided or lacking at the proper season.

A complete inventory of bee fixtures should be taken and plans made for the supplies needed during the coming year. If veil and gloves are used, they should be repaired if necessary, or new ones arranged for. See that the smoker is in good shape. When chopping wood in winter one frequently finds a stick filled with "fox fire," which dried forms fine fuel for the smoker.

Be sure to have plenty of hives and sections. Such goods shipped by freight cost very little for transportation in quantity; when if the order is delayed until nearly time for use it may be necessary to order by express in order to have them reach you at the desired time. There is often, too, a greater demand than supply in the section department, and while the bees are gathering the white clover or basswood honey and storing it in all sorts of undesirable manners, for lack of suitable receptacles, you receive word from the manufacturer that he is "a month behind on orders and cannot get material to fill contracts already made." This state if affairs happens every year with many, and still they delay their order until time for use.

Have the hives clean and all ready to set up at a moment's notice. The bees will be apt to be that much more contented. If any of the old sections are to be used, clean them well. Put small pieces of foundation in the sections and pack them into supers, all ready for use. Gather the bits of broken and refuse comb and melt into wax.

Good wax is always in demand at a good price. There are so many domestic uses for even an inferior grade that it pays to save even the small bits. The seamstress is saved annoyance from knotting by slipping her thread over the wax before using. A small piece of wax tied up in a thin cloth to rub over the flatiron will keep it smooth. Equal parts of beeswax and rosin make a nice finish for waxing floors. These are small matters, yet the profit lies in attending to such little things.

Conneaut Lake. Pa., Jan. 3, 1903.

Contract the hive to concentrate animal heat where necessary, during April.

Several of our exchanges still continue to carry advertising of a Texas bee journal which has been dead more than a year.

FLORIDA.

Mr. Heddon Tells Our Readers of Things He Sees and Hears in the Land of Flowers.

(James Heddon).

IT WAS indeed a great pleasure to assist the editor of this journal in looking over the colonies in his neat and tidy apiary, 300 miles south of the north line of Florida on the justly celebrated Indian river, at Fort Pierce. The accompanying picture was taken while Mr. Hill and myself were discussing the breeding qualities of one of his fine queens, and at the same time the peculiar tendency of bees in this climate to store their honey closely over and around the brood, often leaving the outside combs nearly dry and empty. It was on the 8th of March when the bees were gathering pennyroyal honey quite rapidly and the hives averaged about five combs of brood each. This was quite a different appearance from what might be seen in the hives at my home in Southern Michigan.

In many localities this wild pennyroyal blooms from December to March, inclusive, and often some good surplus honey crops are taken from this plant alone. The honey is light, of heavy body and of very good flavor.

The next source for surplus is the saw or scrub palmetto, growing profusely all over the country. It is a little palm, usually called saw palmetto because of saw-teeth along the stems. It varies in height from three to six feet, averaging about four to five. The honey from this plant is of a different flavor but very agreeable to the taste.

Next, about June 15th to 20th, and sometimes as late as July 1st the black mangrove blooms, remaining about six weeks, as does also the scrub palmetto, its predecessor. The mangrove is confined to low marshy ground, always salty, so it is found mostly on the islands of Indian river and on the narrow strip of land dividing the river from the sea. The honey taken from this tree is white, of a mild and delicious flavor as I know by sampling it, but I learn from Mr. Hill and other Florida bee-keepers that it is of light body, and many of them use different methods of evaporating it before it goes to market. This tree may be called the basswood of Florida but as it usually grows in places not desirable for homes, many Florida bee-keepers move their apiaries to it, which practice is very safe and practical because of this excellent water-way—Indian river. Then the cabbage palmetto, a palm tree, blossoms almost simultaneously, yielding much the same quality of honey as does the mangrove, but it is not as certain a yielder.

Then there are numerous minor honey-yielding plants blooming all the year round, of which the Spanish needle is among the best. Bees here gather some pollen and perhaps honey from some source every week in the year.

I have visited all the sources above mentioned and sampled the honey therefrom, but, of course, haven't seen many of them in bloom, not being here at the right time of year. I cannot conceive why Florida honey should be graded as second class without reference to the source and way it is handled. I cannot imagine anything nicer than properly handled mangrove honey in the comb.

I am firmly impressed with the belief that many locations in Florida are excellent for the pursuit of apiculture. I believe colonies can be increased more rapidly and with greater certainty than in the northern states. I further believe that more bees die from neglect here than in the north and more from that cause than all others. There is this difference: The watchful apiarist has more control over evil causes here than in the north.

The readers of this journal are likely aware that the production of oranges, pineapples, bananas and other fruits is followed to no small extent all along this west shore of Indian river. Truck gardening is also profitable, principally because of the fancy prices received for cabbages, tomatoes, stringbeans, etc., grown during the winter season.

The experience of tourists here, as well the vital statistics of the state, show the climate to be healthful although in many localities mosquitoes and flies are very annoying during the summer months. Everything here is different from conditions in the north, and not a few who change locations from there here are disappointed with the appearance of things. But people here thrive and fail just as elsewhere although I am informed that there is not a poor-house in the state.

With the thermometer ranging from 65 to 85 nearly every day of the winter, living is greatly cheapened, so it is seldom that families come to actual want here.

It would be superfluous for me to speak of the neatness, order and dispatch witnessed in Mr. Hill's apiary and his manipulation of bees. But at the risk of his refusing to publish it (for I find him an over modest man) I am going to tell his subscribers of his genius as an artist, especially in the photographic art. By nosing about his office I find that he is so considered by the art journals of the country, and it is worth a trip to Florida, even from far-away Michigan, to look over the beautiful productions of his skill with the camera, especially among the tropics of Cuba and Florida.

Fort Pierce, Fla., March 14, 1903.

Building Up Strong Colonies in the Spring.

(Harold Hornor.)

THIS subject has been brought up a great many times, but for some beginner who has not seen any of the former articles, this may give him one or two little hints which may be useful.

A crop of honey depends mainly on the strength of the colony; of course, there must be pasture for them to gather their stores from.

The latter part of February, when the bees commence flying, I set out some very fine cornmeal in a warm, sunny place. The bees go to work at it with a will and carry it into the hives, working as late in the afternoon as it is warm enough for them to fly. Some bee-keepers put a little honey in the meal, but I have found the bees will not take any notice of the honey as long as they can get the meal. They seem to be very anxious for pollen in some shape, and if they cannot get it from the flowers they are glad to have this substitute.

As soon as the weather gets warm enough to open the hives, examine the condition of the bees and see if the queen is all right. If I have any frames of honey, I put them in hives having the least supplies, and put feeders on all hives examined. The feeder I use is a home-made one—a cigar box divided lengthwise into three sections, the divisions coming within three-eights of an inch of the cover and having the bottom corners cut off to allow syrup when poured in to enter each section.

Next, cut one end three-eights of an inch below cover to let bees enter box; coat inside with parrafine; put one small nail in cover; bore a half-inch hole in one corner of cover opposite entrance, to put funnel in for filling with syrup. I put this feeder in front end of hives. This brings the hole in cover close in one corner.

All hives are sloped down in front one-half of an inch. The feeder in this position leaves the open end in highest part of hive. The feeder will hold more in this way, without running over. An ordinary cigar box will hold one quart. Cover the feeder with several thicknesses of burlap or old bags.

When feeding, slip cover off a little, turn back burlap to uncover auger-hole, insert funnel and pour in a little feed (from one-half to a full pint, according to strength of colony) and replace burlap. No trouble with bees coming out. If there are any bees in feeder it does not make any difference; they walk up the partitions inside.

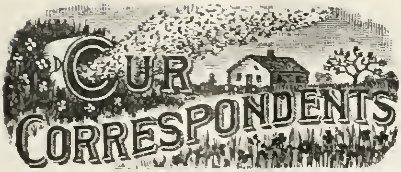
The syrup should be slightly warmed and not too thick—little more than sweetened water. The feeding should be done towards night, to prevent robbing.

In two weeks examine again, and spread brood a little until brood-chamber is full of brood, then put another story of drawn combs on, raising a few of the solid frames of brood up from the lower story to the top one, putting drawn combs in their places.

By this method I have had two brood-chambers, sixteen frames, boiling over with bees and ready for the honey-flow.

Mt. Holly, N. J., Jan. 21, 1903.

Don't handle bees during chilly weather.



ARE BEE JOURNALS READ?

Worcester, Mass., March 16, 1903.
Editor Bee-Keeper:

Under date of February 17, I wrote you about black honey, not expecting to hear any more from it. March 14, just before our regular bee meeting I received an interesting letter from J. R. Common of Angelica, N. Y., which is worthy of repeating in these pages, as follows:

"Twenty-five years ago I had about 30 colonies and they stored several boxes of just such honey as has been made by Worcester bees. No one could eat it; one taste was enough. It was gathered where there were no blooms of any kind. It was honey dew gathered from hickory trees.

"Every morning the hickory grove was alive with bees working for all they were worth. The worst of it was they stored a lot of it around and in the brood nests. The result was that when the bees ate it, dysentery resulted, and I lost most of them the following winter. The stuff was thicker and more solid than any honey I have ever seen in my 50 years' experience in bee-keeping."

One of our members did not agree with Mr. Common, for he says:

"I do not agree with Mr. Common regarding the taste of black honey, nor regarding it as a producer of dysentery among bees. I kept 50 sections as black as my sample, and some a good deal better, thinking the honey would improve in time. But it hasn't changed. At first we wouldn't eat it, but now we find it delicious. One small member of our family even prefers it to the white article.

The Worcester County Bee-Keepers' Association will close its winter season with a banquet early in April. It is expected that the flow of honey will be enormous. Another instance that bee journals are read: We received a letter from a New York bee inspector warning us that foul brood was entering Massachusetts, but more of this later. Both of the letters mentioned above came as a result of reading bee journals. C. R. Russell.

THE Bee-Keeping World

AUSTRALIA.

An interesting article on the "Three Chief Varieties of Bees" by D. M. M. appears in the Farm, Bee and Poultry Review. The writer finds that the black bee is the best bee yet discovered. The editor adds: "There is no doubt that a good strain of black bees is equal if not superior to any other breed. That they are more hardy few, who give the matter unbiased thought, will deny, etc. Take the yellow bands from the Italians, and I am of the opinion there would not be half the trade in queen bees."

The editor of the same bee journal is crying for a commonwealth bee-keepers' association. He also says: "Something must be done to regulate the price of honey or else bee-keeping will never be placed on a sound commercial footing."

GERMANY.

At a bee-keepers meeting at Rackenhausen the subject of stimulating bees was discussed. It was held that honey is much more effective than sugar syrup. The latter, however, was recommended for winter stores.

Brossard is a follower of Wygandt. He heats his bee house in winter; says he may warm his bees up to 86 degrees F. and not a bee will fly out, providing they have water given them. When I come to the apiary and find bees flying out when the weather is not suitable I know they have no water in the hive, and I must supply them—from Phaelzer Bztg.

* * *

Speaking about some honey crystallizing sooner than others, even of the same batch Otto Schulze says this in Deutsche Bienenzucht: "Take honey from combs that have not been sealed and fill some glasses. Wait a few days, or till the combs are sealed. Now extract, and with the product fill some more glasses. Seal these, also the others. Take another quantity of the same honey as last lot, heat it to not over 122 degrees F., allow it to cool and fill another number of glasses. Seal them as the others and label all of them. Store them in the same place. Lot No. 1 will crystallize first. Lot No. 2 after a time. Lot No. 3 will remain liquid a long time." The editor, Gerstung, comments, and says: "Crystallization will be deferred by stirring the honey occasionally."

Deutsche, B. Z.

* * *

The equalization of our colonies in the spring, in other words, the strengthening of weak colonies at the expense of the strong is a matter of consideration only for those who have a fall or late honey flow. The better way for those who have an early flow is to make the good colonies still better by taking from the weak and giving to the strong.

* * *

Wurth in Die Biene Freudenstein seems to have advocated the feeding of sugar syrup; then extracting it and selling it as honey. The bee-keepers of East Prussia are entering a vigorous protest against any such practice.

* * *

According to F. Goeken's investigations in Centralblatt the jarring of the hives by passing railroad trains does not produce an effect detrimental to the welfare of bees during winter. Mr. Dathe has kept several colonies of bees in his living room in which a coal fire is kept all winter. They have wintered O. K. although often jarred, and they develop earlier in spring than the others. When giving water to his bees Mr. Dathe adds a little salt to the water.

* * *

Dizerzon says his twin-hive is the non plus ultra of a bee-hive and cannot be improved.

* * *

The Bienenvater reports an inhabited old log gum which cast three swarms in 1878 and has not cast another one since. It is a large one. The colony is very populus and the annual yields from it have been good.

F. Greiner.

Notes from the Bee-Keepers' Institute.

March 2 and 3, 1903, Canandaigua, N. Y.

Naples, N. Y., March 4, 1903.

The bee-keepers were welcomed by Mr. H. S. Case of Canandaigua, in a well worded address. He said he wanted everybody to feel at home and ask for the information they wanted. By hearing the experiences of the others and by comparing notes every one could learn something. He contended that the bee-keepers as a class did not do business on business principles like other classes of men and urged co-operation, especially as to marketing our product.

Prof. F. Benton remarked that governmental crop reports would have a tendency to give stability to the market.

W. F. Marks addressed the meeting on the advantages of the spaced frame. He uses a metal spacer which he believes is superior to the wooden bearings of the Hoffman. This style of frame was condemned in common by the bee-keepers present that had any experience with it.

Speaking on the "requirements of the hive" F. Greiner held that the present hives were constructed on faulty principles, but were quite well suited to the wants of man. He criticised the thin bottom-boards and flimsy hive-covers and the section-holders which do not protect the top of the section.

Prof. Benton said that by suitable and sufficient protection he could produce better conditions for the bees than they found in their natural abodes in the woods.

The address of Prof. Benton on the Cyrio-Carniolan bee was listened to with interest. He thought that such a bee was the best bee for honey production.

The question-box conducted by the professor proved to be most interesting, and many a nut was cracked by him to the satisfaction of all.

"How to clip queens and how to hive swarms with clipped queens" was treated by H. C. Roat. Many others gave their methods of clipping. Nearly all used scissors for the purpose.

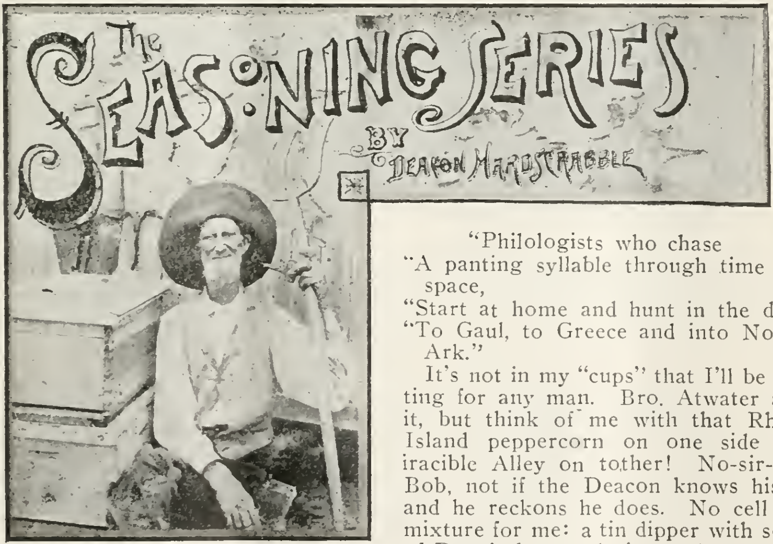
Mr. H. L. Case keeps a goodsized apiary in the village of Canandaigua and his son is his right-hand man in the management of the bees. Master Case described the different operations and their whole management in clear, concise language. Clipping queens is practiced, also spring feeding. The apiary is run for comb honey principally, with as little increase as is convenient.

Queen rearing was gone over in all its details by Mr. Benton, who covered all methods. Other speakers, down on the program for the same subject could add but little more.

"The use of comb foundation in sections" received the attention of the bee keepers. C. C. Southerland opened the discussion. Although the majority of bee-keepers used full sheets, it was nevertheless admitted that comb honey without foundation (except for starters) was better and to be preferred.

During an intermission of the institute the Ontario Co. Bee-Keepers' association elected officers as follows: President, H. L. Case, Canandaigua; First vice president, C. C. Southerland; Second vice president, G. S. Pelling; Third vice president, Chas. Rose; Secretary, F. Greiner; Treasurer, H. C. Roat; Honey inspector, E. H. Perry, Manchester. Delegates to state convention, F. Greiner, E. H. Perry. Alternates, H. C. Roat, C. C. Southerland.

The meeting was well attended and many new members joined the association. F. Greiner, Sec.



The Seasoning Series

By Deacon Hardscrabble

Dear Bro. Hill:

It's a philogical scrap Doctor Sawyer would fix for me. 'Twon't work nohow. Doctor Miller is his boy, sic him and see the Saw-Mill.

"Philologists who chase
"A panting syllable through time and space,
"Start at home and hunt in the dark,
"To Gaul, to Greece and into Noah's Ark."

It's not in my "cups" that I'll be getting for any man. Bro. Atwater asks it, but think of me with that Rhode Island peppercorn on one side and iracible Alley on tother! No-sir-ree-Bob, not if the Deacon knows hisself and he reckons he does. No cell cup mixture for me: a tin dipper with some of Popp's lemonade is good enough.

Gently Harry, go easy with Friend Muth. You muth remember thath Muth ith not in the buthineth for hith health, Thir!

S'prised be you cause a fellow borrowed your copy for his editorials and forgot to give credit? You poor, dear little Innocent. Don't you know some of us always do that way. Credit! Bless your soul, it's a game of give and take. We done "takes" all the credit offered and "gives" ourselves the rest. See! It is a foine way to build up a reputation. We can't help it, we was born that way. You is young yet Harry.

"Dear Deacon Hardscrabble: It grieves me much to see you assailing everyone with whom you do not agree and ridiculing those we lean upon. It seems out of harmony with the spirit of gentleness we expect in the deacon of a church." &c., &c.

Ahem! A-H-E-M! That is an extract from a letter a sweet young thing sent to me and jerminy hoe cakes it came nigh to bustin my family relations. I've not the slightest bit o' objections to the dear girls writin to me,—quite to the contrary,—but thunderation if they don't use a typewriter or a man for addressin their envelopes I'll have to move. But to that letter. I ain't attackin the dearly beloved, I'm only just a callin of your attention to what they say and do. I reckon I ain't to blame for their doins and sayins. Golly Harry, what be I to do? I write you things as I see em and times is when I repeats what folks say that it don't sound lovely sure, but be I to blame for the way they said it? When petition don't work try repetition. The dear girl says "gentleness." Phew! She'd better ask the parson about that. Fact is Harry, when a man says "dear brother," holds my eye with that intent look of sweet solicitude, and simultaneously I find his fingers in my weskit pocket—well, I lambast him fust and considers arterwards.

Say Harry, what is a HUMBLE servant?

I was sure that if you'd give him time enough Prest. Hutchinson would show his sand. Go read what he said on the Nat. in February's Rev., it's bully good. Now if he can get the directors to back him up, things will be doin.

Did ye moind what the Taylor of Lansing had to say on foul brood in the same paper? Fine, mighty fine. Now that W. Z. has pulled him out I hope he'll put a chock behind him and keep him from slippin into his shell aagin.

What d'ye think of Ali Barber and his Forty Hives in a cellar? Gives me the shivers. Not his article, but the recollection of old times.

Art thou surprised cause A. Q. Cumber talks Hustle with a big H? He has to, cause A Q Cumber goes to seed so quick.

Dr. Pons paints a charming picture of Hell Valley. Sounds like a good substitute for Paradise Alley.

Bully for you, Harry. You've got Bro. Blanton out again. Keep him coming. Got the Swarthy Moor, too. Can't you fish up Bro. Pridgen from the Creek? He seems a lively sort of fish. P'raps some of Heddon's fish bait will land him.

Had the Grippe, Harry? I have and it beats Syrians for doing things to you, and if I don't get better of it soon I'll be "yours forever" instead of

Yours as ever,
John Hardscrabble.

Sixth Annual Report of the National Association.

Forest City, Iowa, Dec. 1902.

To the Members of the National Bee-Keepers' Association:

The past year has been a busy one for the General Manager. Bee-Keepers seem to have more trouble with their neighbors than formerly. When the country was sparsely settled and life was not so strenuous as at present, it was a rare case when neighbors sought to restrict the acknowledged right of the bee-keeper and honey producer. But severe competition in all lines of business and the crowding of people into towns and cities has developed a selfish spirit which crops out on many occasions.

But with one exception, no serious legal conflicts have occurred. The past decisions of courts establishing and confirming the rights of bee-keepers are of great importance whenever threats are made or actions begun to determine the legal rights of our members. Many of these decisions have been briefed and printed in pamphlet form for use in just such emergencies. Whenever a member gets into trouble because of his bees and is threatened with damages or ordered to remove them, the printed matter we have is sent to him or his attorney, and in a majority of cases the matter is dropped without further proceedings. It has been my practice not to encourage litigation. If I have reason to believe from the statement of a case that the bee-keeper is at fault, that he has so managed his bees that they have annoyed his neighbors needlessly, I do not encourage resistance to reasonable authority, but endeavor to have him reform his methods and avoid trouble. Bee-keeping is respectable, and I would have it respected through a proper system of management and the high character of its followers.

The most important case which has been referred to the General Manager during the past year was one from Minnesota. Mr. V. Shebat of Wabasha wrote me in July that he was likely to get into trouble on account of his bees, stating the case in a very clear, business-like manner. I sent him such advice and help as I thought necessary. In a hotly contested case which followed, he was triumphantly vindicated. He was so grateful for the assistance rendered that he wrote the following to the American Bee Journal, which I hereby copy, as it states the matter fully and is of enough importance, perhaps, to warrant the use of the space it occupies.

STATEMENT OF MR. SHEBAT.

"I desire to say a few words through the American Bee Journal to the bee-keepers of America.

I have been a member of the National Bee-Keepers' Association for 12 years, and for more than 13 years have kept about 60 colonies of bees on a lot that I own here, and have never had any complaint made to me about my bees doing any damage or being a nuisance until this summer.

A large church is situated on the corner opposite the lot on which my bees are located, but no complaint was ever made that they annoyed or injured anyone. This summer a large church school for girls was commenced on the lot adjacent to mine, and a city ordinance was manipulated through our city countil declaring it a misdemeanor for anyone to keep bees in our city, 'within 600 feet of any church, school house or other public building, or within 300 feet of any dwelling in said city.' This ordinance was passed in the latter part of July and within a few days thereafter two actions were begun against me under said ordinance, and one under our state law which declares, "any act or omission which injures, annoys, or endangers the comfort, repose, health or safety of any considerable persons, a public nuisance." These were all criminal actions, and I was arrested in each case.

The case under the State law was virtually abandoned for lack of evidence and I was declared not guilty, but the case under the new city ordinance was prosecuted with bitterness and venom. The trial was in our recorder's court, before a jury, and lasted the whole of one day.

My attorney, Col. J. T. Bowditch, defended me on the following grounds, viz:

1st. That the ordinance was not authorized by our city charter.

2d. That the city council had no power to make a nuisance of any act by passing an ordinance against it unless the act itself was in fact a nuisance.

3d. That the ordinance in question resulted in taking and damaging property for public use without just compensation to the owner, contrary to the Constitution of the United States and of this state; that it abridged the natural rights of private citizens, that it was unreasonable and unjust.

4th. That if the keeping of bees contrary to the terms of this ordinance was a nuisance at all, it was a private nuisance, for which all persons injured thereby had their redress in the courts, and was such a nuisance as could not be regulated by any general ordinance or law.

These were the main points of my defence, but, of course, each was greatly elaborated by my attorney.

I am happy to say the jury returned a verdict "Not Guilty," and I have since received the congratulations of many bee-keepers on the happy ending of the vicious fight that was made against me.

My chief object in writing this communication is to thank the National Bee-Keepers' Association publicly for the valuable aid rendered me in this fight, and to impress upon all bee-keepers the benefits to be derived from belonging to such an organization.

In the beginning I informed the officers of the association (the General Manager) of the passage of the ordinance and the danger threatened. They at once forwarded to me valuable briefs for the use of my attorneys and suggestions now to proceed if I should be arrested. My attorney says the briefs furnished were of the greatest assistance in preparing my defence, that, in fact, they lightened his labors fully one-half.

After the case was decided, I sent to the General Manager, Eugene Secor, a statement of the costs against me and also a statement of the costs I had incurred in defending myself. I at once received a check for $40 to pay a part of the expenses I had been put to. Surely this is an association worth belonging to, and it seems to me we ought to do all in our power to support and aid any institution that does as much for us as the National Bee-Keepers' Association."—V. Shebat.

Quite a number of other appeals for help and advice have been received, but none of them required any financial aid. The printed matter and letters were all that they required.

The correspondence and the routine work of the office are considerable. Indeed the duties have been more burdensome than I felt like carrying, considering the unjust criticism of a few ambitious members. In my last annual report I asked to be relieved, and, later, tendered my resignation, but was prevailed upon to serve out the present year. I now repeat that I wish the voting membership to elect my successor.

In severing my official relationship with the Association, perhaps the friends will allow me space to call attention to some things that have been undertaken or accomplished during my incumbency.

When the Association was organized in 1896, it commenced business without funds and without prestige. I was its first and only Grand Manager. Through the hearty support and indefatigable labors of many loyal and influential friends it has grown from zero to nearly a thousand members; and although a good deal of money has been spent in defence of bee-keepers and to advance their interests, the financial statement submitted herewith shows its healthy condition. It is no boast to say it is the largest and most influential bee-keepers' society in the world and is doing work that no other Association attempts, since the voluntary withdrawal of the old "Bee-Keepers' Union," under the leadership of that successful manager, Thos. G. Newman.

Here is a statement of some of the more important things accomplished or attempted by this association during the last five years.

In 1898 a good deal of time, energy and money was spent in promoting Pure Food Legislation and in trying to prevent the rescinding of a classification rule by railroad authorities in regard to shipping bees.

The same year an attempt was made by the city authorities in an Illinois town to remove all bees from the corporation. This was prevented by help of the Association.

In 1899 the Association attempted to stop the sale of adulterated honey in Chicago, and spent $300 therefor. While the suits were not successful, the publicity which the suits brought about educated the people to such a degree that an Illinois Pure Food law was passed the next year.

A number of bee-keepers were also successfully aided by advice and help from the Association.

In the year 1900 the celebrated Utter v. Utter case was successfully fought out, and the court rulings and decision will be valuable as a precedent whenever quoted in like cases.

The same year a case testing the Pure Food law of Michigan was brought against a retailer of adulterated honey and the party found guilty and fined.

During the year 190[illegible] another important suit was determined in Rochester, N. Y., fully testing the right to keep bees in cities. (The City of Rochester v. Taunton.)

These cases, in addition to the many settled out of court through the efforts of the Association and therefore never heard of, will inform the new members what the organization has been trying to accomplish.

It has also published for reference and distribution wherever needed, the following pamphlets and folders:

1st. Bees and Horticulture: A 14-page pamphlet (2d Ed.) in which is brought together the latest and best thoughts on the value of bees to the fruit grower, danger and uselessness of spraying during bloom, etc., endorsed by leading editors and agricultural writers.

2d. The City of Rochester v. Taunton: A brief of the law case above referred to.

3d. A New York Supreme Court Case defining property in swarms.

4th. A New York Case as to the liabilities of bee-keepers for injuries done by bees.

5th. The Widely Quoted Arkadelphia Case successfully fought by Mr. Newman as to the rights of bee-keepers.

Newspaper articles the tendency of which was to prejudice the public against the use of honey, written in ignorance or by sensational reporters, have been replied to and in many cases satisfactory retractions secured.

Members of Congress and Chairmen of important Committees have been asked to favor and promote pure food legislation with a view to stopping the sale of glucose syrup under the guise of honey.

In this, my final official report, I wish to acknowledge my obligation to many friends and loyal supporters and to express my thanks for kind and encouraging words. But I am firm in the conviction that it is time for me to slacken the speed of over-driven machinery and turn the affairs of the association over to a younger or more vigorous man.

I have had no conflict with the present Board of Directors nor with any of the Association officials. The utmost harmony has prevailed in our deliberations. I feel grateful for the confidence reposed in me and the unceasing loyalty shown by them.

FINANCIAL REPORT.

Receipts.

Amount on hand at last report	$ 718.67
Received for membership fees during year	546.50
Total	$1,265.17

Disbursements.

Printing last year's report, etc., not in last statement	$ 41.15
Paid G. W. York printing Buffalo's Convention Report	100.00
Paid for defense of Mr. Shebat	40.00
Paid for 1000 buttons for members	50.60
Paid envelopes, postals and Stamps used	60.72
Paid letter heads for association	5.25
Paid pamphlets, briefs, etc.	28.76
Paid use of piano at Buffalo Convention	6.00
Paid legal counsel	10.00
Paid stenographer and clerk	15.00
Paid printing this report, ballots, names	22.00
Salary, 15 per cent. of amt. received for membership	81.97
Balance on hand	803.72
Total	$1,265.17

Note.

If it is observed that the above item from membership fees is out of proportion to the number of names, it is stated in explanation:

1st. That a large number joined through local or state associations at 50 cents each.

2d. That I have not received a cent of the money paid to Mr. Abbot by members ,although their names are on the list.

3rd. The untimely death of the secretary, Dr. Mason, probably accounts for his not remitting money in his hands for dues collected at Denver and at other times. He sent list of names in September but no money.

Respectfully submitted.

Eugene Secor,
Gen. Mgr. and Treas.

The money received by Mr. Abbott, to which Mr. Secor refers, was, we are assured, properly turned over to Dr. Mason; hence no blame can be attached to Mr. Abbott.—Editor.

Help weak colonies this month by economizing heat in every possible way.

Let your hive manipulations be short and that during the warm, sunny time of day, this month.

THE AMERICAN BEE-KEEPER

PUBLISHED MONTHLY BY
THE W. T. FALCONER MANFG. Co
H. E. HILL, - EDITOR.

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Advertisements must be received on or before the 15th of each month to insure insertion in the month following.

Matters relating in any way to business should invariably be addressed to

THE AMERICAN BEE-KEEPER,
Falconer, N. Y.

Articles for publication or letters exclusively for the editorial department may be addressed to
H. E. Hill,
Fort Pierce, Fla.

Subscribers receiving their paper in blue wrapper will know that their subscription expires with this number. We hope that you will not delay favoring us with a renewal.

A red wrapper on your paper indicates that you owe for your subscription. Please give the matter your early attention.

Spring is here.

How are the Bees?

Have you ordered all the supplies necessary for the season?

TRUTH.

Truth crushed to earth, shall rise again;
The eternal years of God are hers;
But Error, wounded, writhes in pain,
And dies among his worshipers.—Bryant.

In the presentation of arguments it is a great thing to be able to always adhere strictly to the truth. Minds are sometimes biased, unwittingly, by our personal beliefs in which we are sincere. However, these beliefs may be based upon ignorance to some extent, or upon a misconception of principles involved. The infinite diversity of belief upon any popular question has absolutely no influence upon existing facts. It has been written that "belief admits of all degrees, from the slightest suspicion to the fullest assurance;" but the actuality—reality—truth, remain unaltered by any degree of belief.

This journal has no higher ambition than the development and presentation of facts and truths which may apply advantageously to the labor and life of the bee-keeper. We strive to treat all with courtesy and due consideration; and especially to give those who differ in opinion with us, an equal opportunity with ourself. Being quite human, we fully appreciate our common liability to error; though, we hope, we are ever willing to frankly confess an error when shown that we are wrong. We have ample evidence in support of our belief that our readers so regard The Bee-Keeper, but there is, at least, one exception among them, and we give below his communication in full:

Wenham, Mass., March 9, 1903.

H. E. Hill:—I am sorry to be obliged to say many of your editorials must be prompted by jealousy and spite. Seems to me I can read these things between the lines. This intimating that some people are all wrong, with no facts to back up assertions, cannot be anything but as above indicated. Am sorry to have to entertain such an opinion, but when you run people down regularly in your paper, I cannot keep from using my opinion on such matters.

Henry Alley.

If Mr. Alley will kindly point out an instance in which we have intimated that some people are all wrong, with no facts to back up assertions, we shall either supply the missing facts or tender our apology publicly. We presume Mr. Alley's grievance comes in on page 36 of The Bee-Keeper, for February. We confess, the comment might have been made much more pointed, but we preferred to be mild. It would seem, however, that any careful reader might have understood that Mr. Alley took it upon himself to make a statement through the medium of the public press, concerning the editor of The Bee-Keeper, which is untrue. If he himself will present "facts" instead of "assertions," reflecting upon the capabilities of those whom he apparently seeks to ridicule, they will be thankfully received, and a public confession of our error, with apologies to him, will be promptly made. At present we have no apology to offer. Mr. Alley himself opened the discussion by an affirmation which we challenge him to "back up" with "facts" as he demands of us. These columns are open to him for the presentation of these "facts." Our readers will please keep an eye out for them. They will be published as soon as received, although it must necessarily be a humiliating ordeal for the editor.

We are not jealous of anyone. We do not believe a drop of blood tainted with jealousy ever coursed in the veins of the writer or any of his ancestors. We consider ourself fortunate in a disposition which finds genuine pleasure in contemplating the success of even a competitor, which Mr. Alley is not. That we should harbor "spite" towards our fellows, our co-workers—those upon whose patronage our business depends for success, appears unreasonable. One thing we do, though, is to hold fraternal interests far above individual ambitions, and we love to meet in discussion a truthful opponent.

"To test honey barrels before waxing, a bicycle pump is recommended in Gleanings in Bee Culture, instead of blowing into the barrel with the breath."—American Bee Journal. Blowing the breath into a barrel or can to test it for leaks, is very unreliable. A decidedly better way is to place the lips firmly in or against the aperture, draw into the lungs and exhale through the nose all the air possible, by repeated draughts, which necessarily become shorter as the air is pumped out of a tight receptacle. By this means much more power, with less effort, is exerted; and in case of a leak, in testing cans, the inrushing air from outside, while the breath is momentarily held to listen, will reinflate the partly collapsed tin, thereby keeping up a constant crackle and ring as the sides readjust themselves to the original position. In testing barrels, when a leak occurs, and while the bung is yet stopped by the human pump, the hissing of rushing air may be audible or if the leak be very small, the suction at bung will be gradually reduced, and readily recognized by the pumper. These we believe to be facts, but we appreciate the fact that if Mr. Alley should demand that we prove it, instead of making mere assertions, it might be inconvenient for us to call upon all bee-keepers with a barrel and can to demonstrate our claim. We therefore ask our readers who may have occasion to test such packages to simply give the plan a trial and exonerate us from our obligation to back up our assertions with facts.

West Indian competition is a factor which materially concerned the promoters of the Canadian Honey Exchange at the last meeting of the Ontario people, the fact being there developed that considerable of the tropical product was already upon the Canadian markets, and that it was selling at a lower price than the home goods. Since these little islands of the tropics produce no bread at all, and are decidedly "shy" on butter, both of which Canada produces extensively for export, the Canadians should enter into negotiations with the islands for a wholesale exchange of commodities. With its efficient management the new exchange ought to be able to place and profitably control all imports of foreign honey into the Dominion.

The Australian Bee Bulletin says: "The English market for Australian honey so far has only been touched with losses."

Mr. L. B. Smith of Rescue, Texas, writes that bees in his vicinity are in excellent condition, and that prospects for a good crop of honey were never better. Mr. Smith joins the multitude in commending our efforts to save the reputation of Southern honey.

Francis H. Leggett & Co., of New York, one of the largest dealers in honey in the United States, and who quote the market regularly in these columns, wrote at the bottom of their monthly report for March, "Market weaker on comb honey on account of liberal receipts from Cuba." Who's a prophet?

The Australasian Bee-Keeper, usually above criticism,has imbibed the "progressive" spirit, and accordingly makes free to dish up without credit matter clipped from The Bee-Keeper. We are pleased to note that so much of our material is deemed worthy of reproduction by our esteemed contemporaries; but if worthy of reproducing, it ought to be worth crediting.

While we believe there are parts of Cuba entirely free from foul brood, we feel strongly impressed with the imprudence of any American bee-keeper ordering queens from that island; and would, farther, suggest that in ordering early queens from any source, the buyer first thoroughly assure himself that his order will not be filled with stock reared in Cuba and imported by the dealer.

Mr. C. C. Parsons, through the American Bee Journal, takes exceptions to some of our remarks concerning the South, as presented during the discussion of the practice of quoting inferior honey as "Southern." Editor York takes considerable space to explain our position in a more lucid manner than we could possibly have done ourself. He recognizes the validity of the points we have honestly and earnestly endeavored to present, and we thank him for "lending a hand."

In this number of The Bee-Keeper we present General Manager Secor's sixth annual report of the National Bee-Keepers' Association. In severing his official connection with the association Mr. Secor takes occasion to recount the many worthy accomplishments of the organization under his leadership; a perusal of which should convince every one of the genuine benefits derived by bee-keepers through membership, and to impress all with our obvious duty to lend our hearty support.

It is quite generally believed that bees in winter quarters must be ventilated, the supposition being that it would be fatal to cut off the supply of oxygen regarded as essential to animal life. In the Bee-Keepers' Review Ira Barber says: "Doolittle never wrote or said a truer thing than he did when he said in Gleanings, that airing bees in winter quarters was a step backward." Mr. Heddon says the ventilation idea is all nonsense. "Stuff all the bees you can into the cellar—pack them in tight—smother them if you can, and the closer you can keep the room the better will be the result in wintering," says he.

The change from a northern midwinter to tropical sunshine naturally enthuses the observant traveler. His mind is wrought upon and influenced by the agreeable change. Perhaps the commonplace presents to his enchanted eye a spectacle of grandeur. In his happy mood, that in which he is especially interested becomes extraordinary and he is eminently inclined to look pleasant, feel truly affable, see the nicest side of everything and to speak kindly to and of those with whom he comes in contact. We feel constrained to offer this word of explanation in regard to the flattering things which Mr. Heddon has written of the editor, in this number.

There are various methods recommended with a view to having bees remain upon the new stand when forming nuclei. This is considered especially difficult when bees are taken from a colony having a laying queen. Mr. Doolittle, in American Bee Journal, tells of an experiment in which he formed a nucleus with such bees, but the bees were shaken at a time immediately following a spell of bad weather during which the bees had necessarily been confined to the parent hive for a week or so, and the result was that, contrary to all his previous experience, the bees remained satisfactorily. This is a point which it may be an advantage to jot down in memory.

Dr. C. C. Miller, the world-renowned apiarist of Marengo, Ill., whose dominant traits are deep thinking and cheerfulness, has recently published another work on bee-keeping, entitled, "Forty Years Among the Bees." The new volume is a real gem, of 327 pages, beautifully bound in cloth and handsomely embellished in gold. It is profusely illustrated with half-tone engravings reproduced entirely from photographs taken by the author, and the Doctor's concise style and cheerful vein is maintained throughout. We have to thank Dr. Miller for the privilege of perusing this splendid book, and can heartily commend it to our readers as a most entertaining and instructive treatise. The price is $1.00.

Mr. Heddon says it took him twenty years at bee-keeping to learn that moisture, not warmth, was the chief essential to successful brood rearing. He says brood rearing is favored rather by cool than hot weather, if the humidity is right. If this is so, in the rearing of worker brood, why is it not equally desirable for the most perfect development of the royal larva? In discussing the queen end of the question in this number, Mr. A. C. Miller includes a mention of the importance of young nurse bees, high temperature and humidity. The former requisite is not new, but we do not remember having seen the point in regard to the two latter propositions so clearly presented. What knowledge have our readers upon these questions?

Again, the editor kindly asks his readers to make all remittances and address all business correspondence to The American Bee-Keeper, Falconer, N. Y., and not to send renewals, or cash for other purposes, to Fort Pierce. Money orders sent to Florida, have to be reissued for remittance to the home office. Applications for sample copies, or reports of nonreceipt of copies by subscribers when sent direct to H. E. Hill, Ft. Pierce, Fla., will have prompt attention, as we keep a supply of copies on hand here. Articles for publication, or questions relating to bees, etc., may be sent to the Florida office, or to Falconer, N. Y., as may best suit the convenience of the correspondent. If our readers will kindly bear these points in mind, our work will be greatly facilitated.

The belief now gaining ground, that the foul brood germ, bacillus alvei, is one of the commonest birds that fly, and is found practically everywhere, fails to find a peaceful resting place in the mind of the writer. The Irish Bee Journal calls attention to a statement of one of its staff of contributors, a Dr. Smyth, who asserts that bacillus alvei is an inhabitant of the human mouth, and further quotes Editor Root as saying that he had found a large variety of bacteria in his own mouth. Editor Root, however, we believe has not said that he found the bacillus alvei in his mouth. If he has really done so, we are forced to the conclusion that the examination was made immediately after a repast consisting in part of honey from that Cuban apiary of his. We have never known of an instance in which foul brood originated spontaneously. We should not like to say that it has never occurred, but our experience has failed to elicit an instance of this kind. On the other hand, once a case of foul brood is introduced into any locality, we have never known it to fail to spread unless checked. All these investigations and theories are commendable, and may lead to the revelation of valuable facts in regard to the matter, but in themselves are quite too contrary to the observations responsible for our present status of mind.

The Rocky Mountain Bee Journal has entered upon its third year of publication, and bears greater evidence of stability than any of the recent arrivals have done. We wish it continued success.

We learn through the Rocky Mountain Bee Journal that the Pacific Bee Journal of Los Angeles, Cal., is dead.

The Chicago-Northwestern bee-keepers' Association is working hard for the passage of a foul brood law in Illinois.

Pollen, or its substitute, is equally as important as honey or syrup in brood rearing. See that these are available.

"Pat" says not to exceed six per cent. of queens are capable of building up to strong colonies, wholly upon their own resources, during an average season, from a three-frame nucleus.

SAY, ALL BEE-KEEPERS, ONE QUESTION, PLEASE.

If you were offered a hive that would save you one-half of your time and labor in its manipulations; one that would save you more than $1.00 per hive in the cost of extra equipments; one which received diploma at the Pan-American; or a double walled hive for the price of a single wall hive would you not investigate its claims or merits? MASSIE'S TWENTIETH CENTURY DOUBLE-WALL IDEAL COMBINATION has all the above grand features and more too. Then why not be on time and send for descriptive circulars today?

It is the best "all-purpose" hive, the nearest perfect; has more conveniences for the apiarist; better suited to the welfare of the bees; has more good principles with fewer objections than any hive in existence.

"THE QUEEN BEE"
tells how to rear the
BEST OF QUEENS;

[illegible] the cause of and remedy for injury in shipment; how they may be directly introduced with positively no risk of loss or injury. It gives much other valuable information. See The Review for February, pages 48 (excuse the errors on that page) and 60. The hive and book are two of the grandest "hits" of the age. Order copy of book today. Price 25 cents and your money back if you are not satisfied.

T. K. MASSIE,
Tophet, W. Va.

HONEY AND BEESWAX MARKET.

WASHINGTON GRADING RULES.

Fancy.—All sections to be well filled, combs straight, of even thickness and firmly attached to all four sides; both wood and comb unsoiled by travel stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy white," "No. 1, dark," etc.

Kansas City, Mo., Feb. 9.—The honey supply is light, with demand good. We quote comb honey, 12 to 16 cents. Extracted, 6 to 7 cents. Good demand for beeswax at 30 cents a pound. Supply light.—Hamblin & Sappington.

New York, March 7.—The honey market is quiet, with plentiful supply. We quote comb, 11c. to 13c. Extracted, 4 1-2c. to 8 1-2c. There is a good demand for beeswax, with limited supply at 30c. to 32c.

Francis H. Leggett & Co.

Chicago, March 7.—The demand for comb honey has been and is of small volume, prices are weak, concessions being made where necessary to effect sales. Fancy white comb honey held at 15c. to 16c. all other grades of white are irregular at 13c. to 14c., light amber 10c. to 12c., dark ambers 9c. to 10c. Extracted clover and basswood 7c. to 8c., other white grades 6c. to 7c., amber 5 1-2c. to 6 1-2c. Beeswax steady at 30c.

R. A. Burnett & Co.

Buffalo, N. Y., March 7.—There is a good demand for honey for this season of the year. We quote comb, fancy 15c. common, 12c. to 14c. Extracted, 6c. to 8c. Beeswax, 25c. to 30c. Common honey is much scarcer than fancy and would sell well.

Batterson & Co.

Cincinnati, O., March 11.—The demand for extracted honey is good at the following prices: Amber, barrels, 5 1-2 to 6 1-2 cents, according to quality. White clover 8 to 9 cents. Fancy comb honey 15 1-2 to 16 1-2 cents. Beeswax strong at 30 cents.—The Fred. W. Muth Co.

Cent=a=Word Column.

It frequently occurs that some member of the Bee-Keeper family desires to advertise for sale some article the value of which will hardly justify the payment of our regular rates; and yet it would be an accommodation if he were permitted to tell others what he has to offer. Some other reader may be in need of just such an article as that of which he wishes to dispose. Again, it is as frequently desired to exchange commodities for which we have no especial use, for something more desirable, and such exchanges are often made to mutual advantage. We have, therefore, decided to place at the disposal of our readers a column devoted to the accomplishment of these ends; though we cannot be responsible for any possible dissatisfaction which might arise as a result of such exchanges. The rate will be uniformly one cent for each word, each month; no advertisement however small will be accepted for less than twenty cents, and must be paid in advance. Count the words, and remit with order accordingly.

$40 per month and expenses paid good men for taking orders. Steady work. Apply Protective Nurseries, Geneva, N. Y.

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FOR SALE—Twenty colonies of Italian bees in L. hives. Address, F. P. Catherman, 623 St. Louis St., Lewisburg, Pa. (3-1t)

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There was a man in our town who thought him wondrous wise; he swore by all the fabled gods he'd never advertise. But his goods were advertised ere long, and therby hangs a tale: The ad. was set in nonpareil (this size), and headed SHERIFF'S SALE.—M. T.

W. M. Gerrish, R. F. D., Epping, N. H., keeps a complete supply of our goods, and Eastern customers will save freight by ordering of him.

The W. T. Falconer Mfg. Co.

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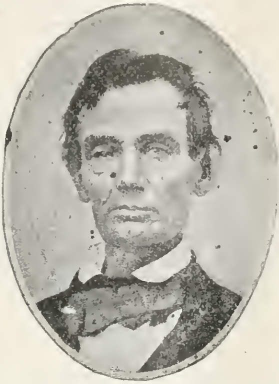

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After a man succeeds in publishing a good journal the next step is that of getting it into the hands of the people, of getting them to reading it, and becoming acquainted with its merits. This can be done by advertising, sending out sample copies, circulars, etc. All this costs money. I think I am safe in saying that for every new subscriber I have received, I have paid out $2.00 in advertising; hence I have often said that a publisher of a good journal could afford to send his paper one year free, for the sake of getting it into new hands. It would cost no more than other forms of advertising and would be very effective, but, for obvious reasons, this plan could not be put into practice, but I am going to come as near to it as I can. I have ebtween 200 and 300 complete sets of back numbers for the present year, and as long as the supply holds out I will send a complete set, and the rest of this year free, to any one who will send me $1.00 for the Review for 1903. For a few particulars regarding the numbers already published this year, read the following:

There is not room here to say very much about the back numbers for this year, but I will mention one prominent feature of each issue.

JANUARY is a Colorado number; six pages being devoted to a beautifully illustrated "write-up," by the editor, of that paradise for bee-keepers. This issue also shows how to make a cheap hive-cover that will neither split, warp, nor leak, in any climate.

FEBRUARY contains the beginning of a series of articles by M. A. Gill, who last year managed 700 colonies of bees, and produced nearly two carloads of honey. These articles are written from the fullness of his experience.

MARCH has an article by S. D. Chapman, on "What Makes Bees Swarm, that I consider the best I have seen on the subject. It gets right down to the foundation of the matter. In fact, so thoroughly does Mr. Chapman understand the matter that he has so made up a colony that one half would swarm, leaving the combs deserted, while the other half would not budge.

APRIL ushers in some typographical changes. The smooth, shiny, glazed paper was laid aside for a soft white paper that gives to printing a clean, tasty, tempting look. The frontispieces are printed in colors instead of somber black. The cover is of Court Gray printed in two colors—Umber and Milori blue.

MAY contains a five-page review of a book by E. A. Morgan, entitled "Bee-keeping for Profit." It was rightly named, the author getting right down to basic principles, and giving the chit of profitable honey production, particularly in the Northern States.

JUNE shows how a man may practically defy foul brood; how he may keep bees in a foul-broody district, all surrounded by diseased colonies, yet keep his apiary so free from it and its effects as to secure a good crop of honey each year.

JULY has an excellent article by Mr. Gill on the management of out-apiaries for the production of comb honey, showing how the work must be generalized, yet systematic, and done just a litttle ahead of time.

AUGUST illustrates and describes the handiest and best bee-tent for circumventing robbers that I ever saw. It also has an article by Mr. Boardman on "shook" swarms, showing how we may practically take swarming into our own hands.

SEPTEMBER illustrates and describes a cheap but substantial bee-cellar, built something like a cistern with a roof over it. This issue also gives some of the best papers read at the Denver convention, together with a lot of interesting items picked up at that convention.

OCTOBER gives a three-page illustrated write-up of Dr. Gandy and his artificial pasturage. While on his way home from the Denver conventon the editor of the Review spent three days with Dr. Gandy, using his eyes, ears, and camera, and this write-up is the result. If you want to know the truth of the matter, read this issue.

Remember that each issue contains dozens of interesting and instructive items aside from the ones mentioned.

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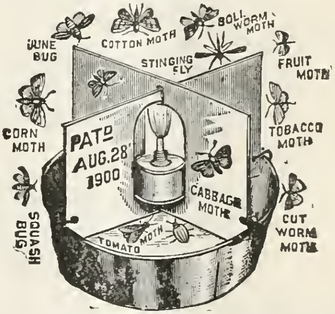

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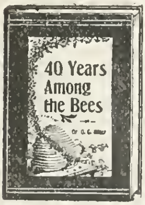

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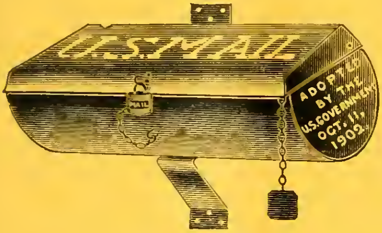
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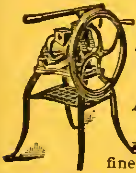

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1903

VOL. XIII NO. 5

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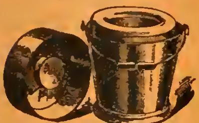

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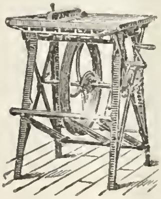

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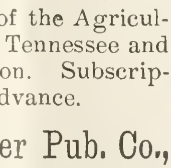

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THE AMERICAN BEE-KEEPER

Published Monthly by The W. T. Falconer Mfg. Co.

Vol. XIII MAY, 1903 No. 5

QUEEN REARING.

(F. Greiner.)

NATURE has undoubtedly practiced the most natural and proper method of rearing queen bees. At least I cannot comprehend how more favorable conditions can be produced than those usually present when our bees take to swarming, viz.: Warm weather, a honey flow and a hive full of bees. The majority of queens have been reared under just these most favorable conditions for untold centuries, and it would seem that our queens today would have to be about as perfect as it is possible to have them.

If certain properties can be fixed by such a certain course of breeding, they must have become fixed in our queens in an intensified degree. I believe they are so fixed, and to undo what has been done by nature would take a great deal of persistent effort on the part of man.

It has been only a brief space of time since man has attempted to meddle with this affair of breeding queens. In fact, a very large per cent. of the queens are reared by nature's plan today, and I do believe that all talk of our bees having degenerated is nonsense, and out of place. Of course we ought to exercise some care and a little judgment (if these articles can be obtained), in breeding queens, so that their excellence may be maintained.

We had not ought to make the mistake of setting your ideals too high and expect to produce by a few years' exceptional favorable breeding a race of bees that will in a few weeks of time fill with comb, brood and honey a 30x40 feet gamble-roof barn with 18 feet posts, or attain the age of a Methusalem. These things are not within scope of the possible. If there is in the present race of bees a lack of uniformity—if some strains have greater wing power, or longer tongues or longer something else, then, perhaps, we might select those which possess such qualities as seem to us desirable; but, generally speaking, our bees are very good already, even the native brown or black bee, and if we wish to maintain the high standard we must follow nature very closely. That is what Dr. Gallup says too.

We all know that when a colony in normal condition makes preparation for swarming, queen cells or cups are constructed and the queen undoubtedly lays eggs into them. As soon as these eggs hatch, the tiny young larva is fed with royal food which, it is said, differs but very little, if any, from the food given to young worker or drone larvae, but in such a manner that a great abundance of the food is always in reach of the little voracious eater. In transferring larvae this condition is not fully met. It would be better if we transferred eggs a la Willie Atchley, or made use of cells that were constructed by colonies under the swarming impulse. How to do the latter and still breed from our breeding queen only is difficult and a problem I have not solved to my satisfaction. (Of course I am not a professional queen breeder and am rearing queens during the swarming season only). The difficulty is in always having ripe cells and not having them destroyed by bees or hatched queens.

If we can make the Swarthmore method of miniature nuclei a success it would not be so very expensive and difficult to make use of a large batch of cells at a time and thus use every one our swarming colony builds; but heretofore we had to break up valuable colonies to form four or five nuc- from each. Many of us hesitated to do so, and often many of the best queen cells were lost. Swarthmore, Alley and others have been studying how to cut down the expenses of getting queens fertilized. It would seem to me that Swarthmore has almost gone to the extreme. While I have succeeded with his liliputian fertilizing boxes, yet I believe the average honey producer would succeed better by using a larger frame than one 4 1-4x4 1-4 and a larger body of bees. I think a half-story frame cut in two vertically safer; each nucleus formed to contain two frames of brood and one of honey to start with, and two more frames may be added later. I could form about twelve or fifteen nuclei from the brood of one hive. The stocking up with bees is best done by bringing them from the out-yard. I have practiced that with good success; but have also used the bees from queenless colonies of the same yard. With us the swarming season continues over a long period, commencing May 28 and lasting till August 15, and when a nucleus hive of above size is once stocked up, quite a number of queens may be mated during this swarming period in every one.

My mating hives, just built, are constructed on the tenement plan, four little colonies under one roof—each one flying from a different side of the hive. Each compartment is large enough to take in five frames. Four of these may be slipped into my regular brood frame the same as the eight 4 1-4x4 1-4 Pratt frames, and may thus be stocked with brood and honey before forming nuclei, or for uniting the nuclei in the latter part of the season. In order to use these small sectional frames as hanging frames in the mating boxes a projecting top bar must be fastened to each frame, which is easily and quickly accomplished by the use of two window-blind staples. I borrowed the idea from the Swarthmore mating box.

Too much stress canot be placed upon keeping careful record of all our queens and what their colonies are doing. It matters not whether one uses a book, a tag, a slate or a piece of board. I write on the honey-boards, and on many of them may be found the record of the past ten or fifteen years. This record is necessary so we may know what queens to breed from. Anything remarkable about a colony or their queen ought to be noted down for reference. We are then in shape to select our breeders from among our own bees. We bee-keepers are quite apt to send to some breeder for a choice queen, paying from three to five or more dollars for one, often to find that our own stock is just as good. I have been there myself and have come to the conclusion that I would have been just as well off if I had kept the money and bred from my own bees.

Naples, N. Y., March 20, 1903.

Equalizing for The Honey Flow.

(Arthur C. Miller.)

THE following remarks are particularly for persons of but few years' experience, the veterans, presumably, know most of it, but even they may well recall that it is the number of strong colonies that count for a surplus crop and not the number of hives with bees. How to get all the colonies strong has been the subject of many an article, and what I have to say here may not add much to what has already been said, but perhaps by saying it in a different way I may make some points more clear.

When this meets the eyes of the readers of the Bee-Keeper it will be too late to look for stimulative feeding for aid even if it were a really profitable aid, which I believe it is not, so some other method must be found. The first step is to go over all the colonies, note those that are really strong, those that might advantageously be a little stronger, and the moderate to weak stocks. For the purpose of honey we should class the only-fair stocks with the weak, while if looking for increase we would do differently. The first class need no present attention; to the second, those nearly strong enough, give frames full of brood from the moderate stocks, those of the third class. If the stocks to receive this brood have brood in nearly every comb, take away the least filled combs and replace with combs full of sealed brood. Follow this until every stock of the second grade is as strong in brood as the strongest. This can be done very safely in May if the stocks are really fairly strong and sealed brood is given. Of course the combs may have a little unsealed brood in them, but the more fully sealed the better. This puts the second grade of colonies nearly on a par with the first.

Next, proceed to the now weakened colonies of the third grade and by a judicious uniting of brood and bees make as many strong stocks as possible. Previously we have only transposed combs of brood, now we use bees and brood. In this last work strive to get the combs having the most unsealed brood in the center of the hive, and those having the most sealed, at the sides. It may take the best part of three or more colonies to make one fairly good one from the stocks in the third class and even they will not equal stocks of the first or second class in piling in the surplus unless the harvest is exceptionally late.

The balance of the brood and bees left in the third class must be gathered together as well as possible and later they may be strong enough to break up for nuclei or to brace up some other stock.

In all this work an eye should be kept on the supply of stores. Really this part should have been seen to last fall and then there would have been more strong colonies and the stores would be in the right part of the brood nest.

May is perhaps the hardest month of all for most bees in southern New England. Strong stocks have drawn heavily on their stores for brood food and unless they have a good reserve a cold storm often brings disaster. If any stocks are found short of food or are likely to run short before the clover flow, they should be supplied at once, that is, given all they are likely to need just as quickly as it can be done.

The Quinby plan, for the keeping alive of which we are indebted to Dr. Miller who always most carefully takes pains to give the credit to Quinby, is the easiest and I think one of the best for use at this season. It consists of filling combs with hot syrup and hanging one or more of them in the colony to be fed.

A little later in the season, say at the opening of the harvest, I would not advise the novice to do much uniting. Sometimes it pays and sometimes it does not. It seems impossible for man to then unite bees of the various ages in proper proportions for uniformly favorable results.

The foregoing is an intensive form of bee-keeping and one which I now seldom use, preferring to so prepare my stocks the previous fall that such methods are not necessary, and when I do think it wise to do some such combining I do it by the wholesale, taking a whole shallow brood chamber instead of one or two combs. But knowing that few beginners have such hives I have described the methods I used with L hives.

Intensive bee-keeping may be very pleasant to the bee enthusiast but it is very costly in human labor.

Providence, R. I., April 7, 1903.

ARTIFICIAL POLLEN.

(John M. Hooker.)

MR. HAROLD HORNOR in his article on page 100, of this paper, advocates the setting out of "very fine cornmeal in a warm sunny place, the latter part of February, when the bees commence flying."

This feeding of artificial pollen, if done at all, must be done with great care. The bees will work "with a will and carry it into the hives" and store it solidly in the cells in great quantities. If this is not required for immediate use, it becomes very hard. The bees later on, being able to get pollen in the natural way, which they can manipulate more easily, and it is allowed to remain in the hive partly filling numbers of cells which otherwise would be used for brood.

I tried the feeding of pea meal in England, where at one time its use was advocated by many, but only in exceptional districts is it now used, where little or no early pollen can be obtained in the natural way until much later in the season. It was found that many of the combs were half filled with this meal, honey being placed on the top of it and sealed over, having both the weight and appearance of being full of honey. Little honey, however, was obtained from them in the extractor, and the pollen-bound combs had to be melted down. Sometimes the bees will bite away the comb, down to the midrib, and roll the hard masses of meal out at the entrance and the labor and time occupied in doing this is considerable. I have seen this occur in my own apiary.

In going over the colonies in the autumn, the bee-keeper often feeds some of them with insufficient stores and gives the combs taken from the brood nest sealed over in the early season, and being dark in color does not extract them, but keeps them for this purpose, to find later on that the weight of combs was not all honey, and that the bees have suffered for want of stores.

PHILADELPHIA BEE-KEEPERS.

I would like to say I spent a very pleasant day at Mount Holly, N. J. with the Philadelphia Bee-Keepers' Association, which Mr. Harold Hornor had kindly invited, and was much pleased with all I saw. The apiary consisting of more than 100 colonies, was exceedingly neat and well kept, and all appeared to be strong in bees, which had given him a considerable harvest of very good honey which I sampled. He evidently has a good strain of very gentle bees, the members of the association walking about and standing among the hives and I did not see a single angry bee.

Philadelphia, Pa., April 15, 1903.

The editor is expecting a letter from you.

Old Comb vs. New for Extracting Purposes.

(W. W. McNeal.)

TO A MAN up a tree it looks very much as though honey producers in many instances are making the same mistake in this matter they did with queen bees—losing sight of practical worth and following the color line.

When I speak of old comb don't understand me to mean any old thing in that respect; I mean combs that are nicely built in the frames, the kind you are proud of in the brood chamber. One of the nice points in the management of bees is to make them show a willingness to enter the supers. Unless the apiarist is master of this, he holds a very uncertain hand. But the trick is easily turned by the use of those old blackened combs so assuring to the younger bees. There can be no question as to the superiority of such combs for this purpose. The bees recognize in them greater warmth and protection and having been the cradle of bees gone before, the wax-working element of the colony feel right at home while upon them.

Give a colony a super of combs made up alternately of old and new comb and in nearly every instance the bees will seek the former, storing the first honey in them that is carried above. I admit the newly-made comb looks more tasty, but that the honey stored in it is really superior I am not so certain.

Honey taken from black combs containing large quantities of pollen and brood in all stages of development cannot help bring inferior in quality. But there is no necessity of such a state of things in the extracting supers. Combs made black by usage may be entirely free from everything save the thickened linings of the cell-walls. This I do not believe, at present, to be sufficiently detrimental to warrant their exclusion as extracting combs. Better compromise the matter by keeping about one-half of each kind, using the older combs early in the season to coax the bees above, and then the others when work is well agoing in the supers.

The fear that black combs will discolor honey is usually much greater than the facts will bear out. While much of the discoloration which comes of soaking old combs in water is due to the residue of pollen and refuse not present when honey is stored, this simple test should not be taken conclusively. The action of water upon old honey comb is such as to cause disintegration of its parts. It penetrates, loosens and breaks down the structure of the walls of the cells and eventually rots them away from the base that is composed of pure wax or the foundation of commerce. But not so with honey. It may be held stored in the comb in solution for years without weakening the strucure of the combs. We see the same difference when honey is put into a barrel; instead of entering the fibers of the wood as water would do causing the staves to expand, it draws out what little moisture that remains, causing the wood to shrink and the barrel to leak.

Old combs may be handled so rapidly without fear of their being broken that this point alone is worth much in the production of honey on a large scale. When spaced a little wider apart than it is natural for store combs to be, the bees extend the cells till there remains but the usual distance of about one-fourth inch between the capped surfaces. This gives to the operator the advantage contained in newly made comb, as he wields the uncapping knife; the keen blade shoots through the tender strip just above the toughened combs beneath, with ease and satisfaction.

It is my desire to point out to the beginners in apiculture the best methods to pursue in the production of honey and also that of the highest quality. Fully realizing the fact that we cannot be too careful of the quality of the goods we sell. I would not discard, however, the use of old combs wholly till it has been more fully established that merely color alone is a source of contamination to honey stored in them.

Where climatic conditions are such that warmth of comb is not a factor to be considered, newly made combs in frames substantially wired may be preferable. They are lighter to handle and much more catchy in appearance to the eye of a fastidious purchaser of honey. But in many places in early spring the bees show such a decided preference for the warm, black ones that their places can hardly be filled with those pretty white, delicate combs.

Wheelersburg, Ohio, April 9, 1903.

A MELLIFLUENT SUBJECT.

(Kate V. Austin.)

WHAT an ideal rural life Aristaeus must have led! Reared by the nymphs, who fed him on nectar and ambrosia, thus rendering him immortal; taught by them the culture of the olive, and the art of bee-keeping; paid divine honors by the ancients for having first invented the art of drawing oil from the olive, and the introduction of apiculture, what wonder that the name of Aristaeus should suggest sylvan shades and hum of bees.

But "the fair humanities of old religion" have passed away, and with them has gone the son of Apollo and Cyrene, while as for the bees of Aristaeus, they are without doubt, to this very day, gathering honey in the Elysian fields.

Among the various names ascribed to Aristaeus, certainly the one of Melissoeus falls the most mellifluently upon the ear. Every letter of that name is honey-combed together in the most delightful manner! Alas, for the departure of the introducer of bee-culture! Now, mankind must seek its Melissoeus in manuals and magazines, albeit their authors and editors have tasted no other nectar and ambrosia than that delicious substitute furnished by bees.

It would seem that in order to have a sympathetic knowledge of the bee, that one should have a certain kinship or affinity with this dainty visitant of flowers. Notwitstanding the fact that he is to be read with indulgence, old Charles Butler must have belonged to this happy class. Regarding Butler's intimate friendship with bees, one remembers what Thomas Fuller so quaintly records of him, that "either he had told the bees things or the bees had told him."

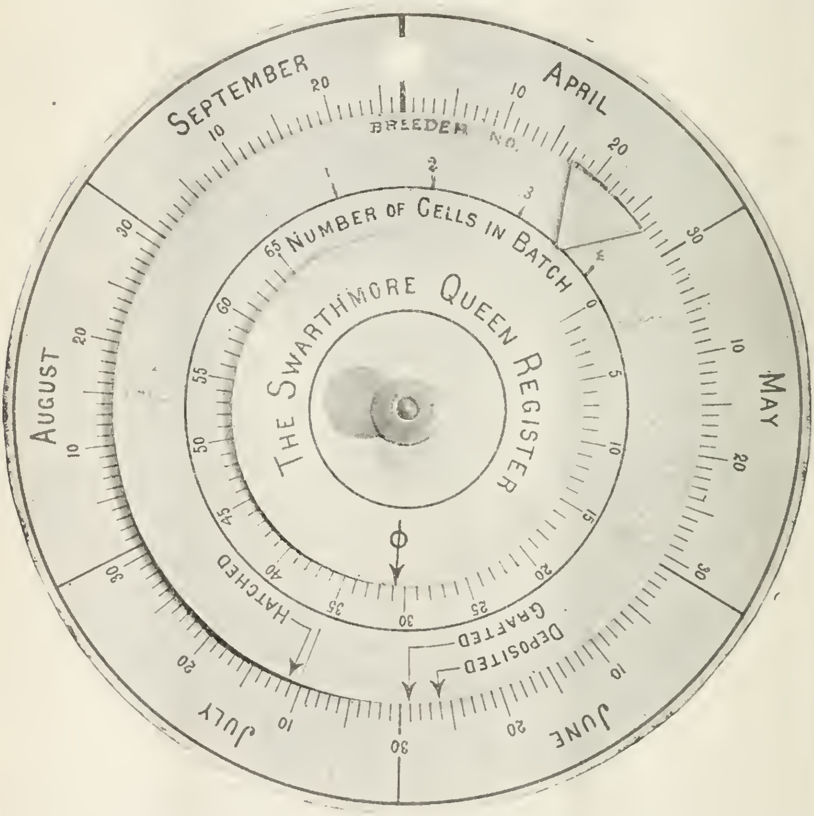
Those who love the occupation of Aristaeus are many indeed. But even the best bee masters tell us that there are yet unexplained mysteries. Aristaeus no doubt, possessed the key to all this occultness, but he did not leave it behind him, dangling in the lock. Perhaps it is right that many of these mysteries should remain hidden, and in the words of that strangely impressive tale of "Vathek," it is reserved for man in this instance "to be ignorant and humble."

Centerville, Ind., Jan. 16, 1903.

A New Queen-Cell Register.

(Swarthmore.)

THE REGISTER I am sending you has been used by myself with a great deal of satisfaction. It is not by any means perfect yet, but by another season I hope to improve it and shall be glad of any suggestions with a view to perfection. Even in its present crude form this register has been a saving to me and a convenience worthy of consideration.



As you, Mr. Editor, have already suggested, some three or four more months are needed upon the card to make it useful to the southern rearer—these I believe can be added without over-cramping the calculating spaces.

By the Swarthmore plan of queen rearing the breeding queens are forced to deposit their eggs directly in the compressed cups, and when secured the indicator is forthwith placed to the date they were laid. This at once gives all the data for the starting and handling of queen cells up to the time of their hatching. For instance: Say we have eggs laid April 1; place the dart "Deposited" to the point on the disc marked April 1 and fix it there by tightening the thumb screw. Now by referring to the second dart will be found the date on which the cells should be started or "grafted" according to the method used. The third dart indicates the day upon which the cells may be expected to hatch and the line just before gives the date of their removal previous to hatching.

Hang the register up on a peg, in plain view, until all the cells in a given batch have been disposed of, when it may be broken and used for recording other batches of cells as stated. If many batches of cells are to be started, one directly after the other, several registers will be needed to properly record all the cells.

The number of the breeding queen, used in a certain batch of cells, is indicated on the upper disc and is recorded by moving the binding wire to the right or left so as to enclose the desired figure.

When removed, after starting, the cells are classified and are placed in full colonies to be completed. At this time lead pencil records are made (which are quickly erasable with the thumb) opposite the numbers around the outside of the disc, which will tally with the numbers given the full colonies used in completing the cells.

The small disc is for indicating the number of cells started in each batch which will be readily understood by referring to the drawing above.

Swarthmore, Pa., June 17, 1903.

Our
Correspondents

Keating Summit, Pa., Jan. 5, 1903.

Editor Bee-Keeper:

My apiary is located in McKean county, thirty miles from the New York line, where the hemlock forests stood very thick a few years ago. Our honey crops are obtained in early spring from sumac and fire cherry. In June we have the raspberry and white clover, with an occasional fall run from goldenrod.

In May, 1898 I bought two colonies in story-and-a-half chaff hives. Since then I have used nothing but the Falconer chaff hive, and believe they are the thing for this climate. I set my hives on the ground and cover them with "Red Rope" roofing paper and keep them well painted. At first the bees made it very warm for me, so I ordered a smoker, rubber gloves and the American Bee-Keeper, and began to study. The first year, I took 135 pounds of honey. I clip all my queens, and have never lost a swarm to my knowledge; or have I ever fed my bees a dollar's worth of anything but honey. I keep each colony strong in summer by taking from those that are exceedingly strong and giving to the weaker. I allow the bees all the honey gathered before raspberry bloom, then I put on all the sections that I think they can keep at normal heat and add as fast as consistent, keeping drone cells uncapped. At the close of the honey flow I take off all capped sections and return to them the uncapped ones, and wait for goldenrod to finish up.

Last season was a very poor one here, but I got 750 pounds from 23 colonies, with an increase of nine colonies. This was 400 pounds comb and 350 pounds, extracted. I have forty hives, extractor and sufficient stock of supplies for this year, and the apiary has a credit of $7.84. My crop for 1902 netted me a total of $79.00.

Yours truly,

C. W. Sewell.

Knox, Pa., March 26, 1903.

Editor Bee-Keeper:

Last season I was troubled with a few of my bees collecting and clustering at the entrance of the hive, and not working, although the fields were full of honey. They would only work a few hours in the morning, then would cluster about the entrance during the afternoon, while my neighboring colonies were still in the field. How can I prevent this, this season?

I was also bothered a great deal during the swarming season. Several colonies had the swarming fever, and as fast as I would cut out the queen-cells they would rebuild them. What method would you use to keep bees from swarming? The bees are shaded during the hottest part of the day, and I always give them plenty of room with sections.

Yours very truly,

Emory Beck.

(Perhaps the treatment for the prevention of swarming, which you practiced, was responsible for the idleness of the bees. Continually cutting out the queen-cells as a means of preventing swarming is not generally regarded as practicable, for the reason that successively thwarting their swarming plans in this way, seems to discourage the bees, and they become sulky and indolent. Different strains of bees are not uniformly active. Possibly, a change of queens early enough in the season, would afford relief from your trouble. Try a little upward ventilation during hot weather.

We regret our inability to outline a practical method for the prevention of swarming. Indeed, it is doubtful if there is any known plan by which swarming may be profitably prevented. The subject is one of the oldest and most perplexing that bee-keepers have discussed. For something exhaustive in this line, we recommend a reading of Dr. Miller's new book, "Forty Years Among the Bees," just published. To anyone interested in bees, this new volume is invaluable; in fact, we know of no other means by which the apiarian student may possess himself of so much information by little reading and at small cost.—Editor.

Jasper, Ga., March 17, 1903.

Mr. Editor:

I have read with much satisfaction what you and others have said on "Southern" honey. There should be more said, and the subject sifted until our words mean what they say—until every honey eater, buyer and seller, will understand at a glance the difference between extracted and strained honey. There are several ways to get up strained honey; by dripping, by squeezing and boiling, wherever you find the log and box-hive, you will find strained honey. With few exceptions, there is a certain time to "rob" bees by these primitive bee-keepers. Some "rob" on the old of the moon, some wait until corn "tassels out," and rob mostly "of a night." Their smoker consists of a roll of rags, with some one to do the blowing and ashes are blown into the honey. It is cut out to the cross-sticks. Black comb, young bees and "bee-bread," as they call it ,all together, and it is mashed up and allowed to drip, or it is squeezed out, or the whole is put into a pot and boiled, and the wax, bees and pollen skimmed off. An old gentleman said to me that he could not sell his honey at all. I asked him what shape it was in, and he said it was strained and in a barrel. I asked him how he separated it from the comb or wax, and he said he "just put it all into a large pot and boiled it." Then he said, "dem bees done gone and just made a mess of dat honey." I took off the supers and the sections and, to find some of the whitest honey I ever saw. It was gathered from the tupelo. He said, "dat honey not like my honey; my honey black and red. Dem bees do better in dem hives dan in mine." He had some strained honey that was very dark. We extracted some honey from an apiary at same place and got some tupelo honey that had a fine body and almost water-white. Many people have confounded extracted honey with strained honey, when there is a vast difference. The man that puts his money and labor into the business on the modern plan and produces an article of honey that is as far superior to strained honey as extracted honey is to black molasses. And then to have his honey classed with strained honey is not doing him justice. He should have the encouragement of all honey buyers and consumers. This strained honey business is not confined to any certain locality or section of country; but it will be found south, north, east and west—wherever the hollow-log and box-hive is kept.

Yours truly,
T. S. Hall.

Rock Valley, N. Y. April 13, 1903.

Dear Editor:

Perhaps some of my experience in a case of wholesale starvation of bees, this past winter, may be a help to some other bee-keeper if I give it to the public.

Going over my bees late last fall after the worst honey season I have ever experienced, I lifted each as I usually do to see which needed feeding. I did not take into consideration a larger number of bees in a hive and also the increased weight of old combs, which most of my hives are filled up with. Thus the 500 pounds of sugar I fed last fall was in most cases thrown away for it was not more than one-third that ought to have been fed. But now,along the latter part of February I find only one-half of my fall count alive and in need of stores. Many of them weak in numbers, and to feed with the Miller feeders as I did in the fall might be fatal, so I have fed a barrel and over up to present date, and expect to feed still another by disolving one pound of sugar in one pound of water and filling my best worker combs, pouring the syrup from the coffee pot into a pail-cover having a dozen or more holes pnuched through it, from the inside. If these holes are punched just right one con fill combs quite fast, and after filling them over a vessel that will catch the drip, then hanging them up to drip off, after filling 15 of 20 I commenced placing them inside the brood chamber close up to the cluster, exposing the bees little as possible and repacking them snug and warm again. This way seemed to me to be the best, under the circumstances to feed them; although several have been robbed out and have died of starvation since I first fed. The weak colonies I have united with strong ones. I do not expect to have, out of my 150 colonies in two apiaries, more than 50 left. Others are in the same boat, in this part of the country.

Yours truly,
E. J. Haight.

Philadelphia, Pa., April 15, 1903.

Editor Bee-Keeper:

The Philadelphia Bee-Keepers' Association, one of the oldest, if not the oldest bee association in the United States, met at the residence of Dr. Townsend 1514 Vine street, Philadelphia in April, where Mr. E. L. Pratt read a very interesting paper, "What I Saw in Florida." Several matters from the question box were afterwards discussed.

On the 13th at Forest Hall, Columbia Ave., Philadelphia, by invitation of "The Royal Arcanum" Mr. W. E. Flower, vice-president of the Bee Association gave a lecture on bees, illustrated with many stereoptician lantern slides of bee life, and views of apiaries in the neighborhood, in Canada, England and France.

Yours truly,
John M. Hooker.

Shoemakersville, Pa., April 17, 1903.

Editor Bee-Keeper:

There are so many bee-keeping friends who go to great trouble and expense in making bee-cellars and putting bees in the cellar in the fall and out on the summer stands in the spring, which I think is not necessary. I winter my bees just as well on the summer stands with very little trouble and expense, and I have very little loss. About November I put corn-fodder around the hives except in front, and in the spring I generally have strong colonies: and in March, or as soon as the bees commence to fly I put wheat flour in pans and place them about a rod or two in front of the hives; and when the honey flow comes I have strong colonies and early swarms. I have tried the corn-fodder for five years with good success. Last winter or the winter of 1901-2 was a severe one for bees: nearly all the bee-keepers around here lost half or even nearly all their bees, while I lost only one out of six colonies and last winter I lost none, out of eight colonies and my bees are in first-class condition, and I expect early swarms this summer .If you think it proper you can publish my plan of wintering bees in the American Bee-Keeper for the benefit of our brother bee-keepers.

Yours truly,
F. F. Kauffman.

With the return of spring—the season of gentle showers alternated with balmy days and fitful bursts of sunshine, apple blossoms, dandelions, humming bees and yellow pollen—the enthusiasm of the bee-keeper is rekindled. There is a peculiar fascination about the sight of the first pollen-laden workers returning from the fields of early springtime, and the thought that once more we are at liberty to mingle with our pets and assist their faithful efforts to accumulate a store. We are not all similarly constituted, of course, but to us it seems that the bee-keeper who fails to derive a large degree of inspiration from this glorious awakening of nature, had better discontinue his apicultural efforts, trade his bees for a very poor boat and take to the high seas.

With reference to the Mississippi floods, of which he himself had been living in danger for some time, Dr. Blanton wrote us April 1st, from Greenville, Miss.: "Mr. Robert Adams' apiary of 200 colonies, in suburbs of the city was in a few hours swept away, and his extracting house was rolled up against the Illinois railroad, 300 yards distant. Where his apiary stood the water is now twelve feet deep." This is indeed a great loss, and one which will elicit the sympathy of bee-keepers.

THE Bee-Keeping World

AUSTRALIA.

The bee-keepers of Australia are in need of a honey-exchange as much as those of other countries. Mr. Colbourne says in February Review: "With but one-fourth of a crop of honey the Sidney commission houses are glutted with honey, yet in many of the country towns honey is scarce and selling from three and one-half d to five d per pound. The bee-keepers of some towns are shipping their honey to Sidney commission houses, yet there is a good demand for honey in their own towns at four d per pound. When will this state of things cease to exist?" It is the opinion of the Gleaner that the bee-keepers of the world ought to do business on business principles.

Mr. Colbourne also says in the same number that he does not wish to "make a lot of new bee-keepers, but to make those better already embarked in the business."

Mr. Sidwell proclaims a new discovery as regards the laying of eggs by the queen, he says in substance: In observing a very large queen depositing eggs in worker-cells I concluded, from the distance she backed down in the cell that she never got the extreme part of her body near the bottom of the cell. To see what was going on I blocked a cell with my pen-knife as soon as the queen withdrew her body from the cell to prevent the workers from poking their noses in. The egg was at the bottom of the cell laying on its side and not in the center. It was not long before a worker entered the cell and on looking afterward the egg was on its end in the center of the cell. As the queen crawled over the comb there were always two or three workers following her. As soon as one poked into a cell another took up the running. The general way the queen lays the egg is, she crawls over the comb with her head swaying from one side to the other apparently looking for empty cells and simply laying the eggs on top of the comb as she comes to the cells requiring eggs. She just stops for a moment and you can see an egg protrude, a worker taking it with her front legs then diving down into a cell in which it may be found securely fastened." The Gleaner has seen queens depositing eggs in combs many times but his observations do not coincide with the above.

FRANCE.

The minister of war has concluded to open a course of lectures on apicultural subjects for the benefit of the soldiers.

A society is to be established among the bee-keepers of France. Its object is the mutual protection of its members.

SWITZERLAND.

Young bees do not begin active work till four days old. They pay no attention to a queen until then. Only a portion of the young bees act as nurses. A part of the field bees act as nurses. These assertions are made by Kramer in Schweiz. B. Z.

It has been stated in Bienenvater, that the honeys gathered from Aconitum napellus, Acelia pontica, and Rhododendrum ponticum have poisonous properties and that at one instance two shepherds in the Alps died from eating such honey.

It is not fully settled whether or not the larval food given to workers differs from that given to drones and queens, so it is said editorially by Deutsche Ill. B. Z. It is also said that Schoenfeld's assertion that larval food being a fully digested food and identical with bee-blood is not recognized by all. How can it be? Planta's investigation regarding the larval food are not in harmony with Schoenfeld. If the larval food is fully digested food —pollen, honey-water—there cannot be any difference between royal food, worker larva or drone larva food.

Nearly all authorities in Germany claim it of importance to give the bees water in their hives. Herr Miecr of Gera claims in Bienenvater that an ample supply of good well-ripened and sealed honey is all that is necessary; to this the editor says: "Yes it is true, it is not necesary to water bees in their hives but it is much better to do so."

AFRICA.

H. Wiese, a young German bee-keeper started from Germany for German Southwest Africa last fall with a number of colonies of bees. He writes from Swakopmund that his bees are alive and flying but that they suffered a loss of nine-tenths of the bees on the voyage.

The Africa-Explorer, Klose says of honey production by the natives of Togoland, that they use decoy-hives made of clay—a sort of earthen pot, sometimes open at the bottom, sometimes closed up to within a small entrance hole; they are placed among the twigs of the trees, and when occupied by wild bees and filled, are taken up. The honey is said to be strong and inclined to soon ferment.

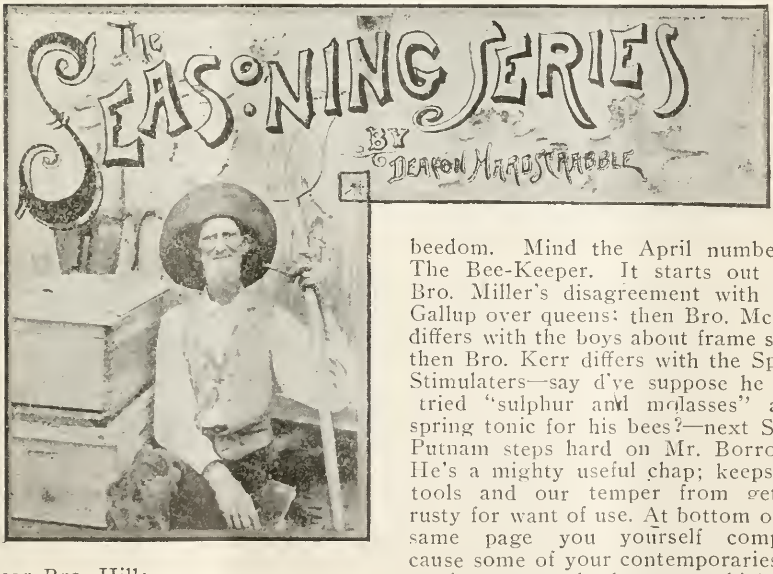
GREECE.

The honey from the mount Hymettos had a great reputation even among the ancients. An apicultural school with experimental apiary is to be established on the same mount. A bee-keepers' association has been organized for the promotion of apiculture there.

ARGENTINE REPUBLIC.

According to a private letter from Mr. Noelting Arg. R. bee-keeping is not as profitable there as it is in the United States, and he thinks the trouble may be in the stock, their bees being of an inferior strain. Ten to fifteen kilos is considered a good average yield.

F. Greiner.



The Seasoning Series

By Deacon Hardscrabble

Dear Bro. Hill:

"In every age and clime we see
Two of a trade can never agree"

and if ye would doubt it my boy just cast your eye over the uneasy sea of beedom. Mind the April number of The Bee-Keeper. It starts out with Bro. Miller's disagreement with Bro. Gallup over queens; then Bro. McNeal differs with the boys about frame sizes; then Bro. Kerr differs with the Spring Stimulaters—say d'ye suppose he ever tried "sulphur and molasses" as a spring tonic for his bees?—next Sister Putnam steps hard on Mr. Borrower. He's a mighty useful chap; keeps our tools and our temper from getting rusty for want of use. At bottom of the same page you yourself complain cause some of your contemporaries advertise a very dead paper—which was never much alive. Oh, that is by no means all for Bro. Heddon sweetly disagrees with your ideas of self effacement. It's a "scrap" from cover to cover. But "scraps" have their uses b'gosh, 'tickularly scraps of gossip. Have you read Gleanings for April 1st? You should have. Lots o' queer things in it and useful too. Ernest tells how McEvoy works when bees get up all at once and swarm—just pulls the blanket up over their heads. Odd conceit, but he says it works.

Bro. McEvoy is also quoted as sayin' that foul brood will soon be a thing of the past in Ontario. Let's send him to Cuba.

But you just oughter hear how they're agoin' to stop pear blight. They're agoin' to keep a surgeon with anaesthetics, antiseptics, cosmetics and other 'ticks in each orchard and when a tree is taken sick the surgeon is to amputate the sick spot.

Bro. Pridgen has part of quite a long story about some queen rearing hives he's made. Let us hope he is not going to try to sell 'em to us. We'll buy his queens but not his fixins'.

Bro. Holterman does some good emphasizing about comb foundation but I reckon a good many of we uns won't agree with all he says just the same.

Then there is a chap named Girruls who is a shouting for "chunk" honey. By the way if you want a jolly scrap say something against "chunk honey" and Bro. Hyde will accommodate you. 'Pears as if he's afraid that if he don't holler, and holler loud, the sale for it will stop.

Bro. Aiken and Ernest are having a little tilt over philological matters and I note that "shooked" swarms are now "forced." Slowly the world do move.

I see Bro. Moorehouse of the Rocky Mt. has got the "foot note" disease. Wonder did he get it from nightly promenades with that new assistant of his? However, he's got it, its bad, powerful bad. 'Minds me of an old woman who is bound to have the last word, and its discourteous to his contributors and readers both, whether the foot note commends or condemns. Here's a hopin' he soon gets over it. Wish Ernest could get over it too, but I fear tis bred in his bones, b'gosh.

"To the makin' of books there is no end" for which same we uns should be truly grateful elsewise Dr. Miller's latest might not have appeared. Powerful obliged to you for the copy you sent me. Here's hopin' again that you'll live to write about your forty or more years among the bees—if you don't get switched off on cameras.

Yours as ever,

John Hardscrabble.

NEXT NATIONAL CONVENTION.

Chicago, Ill., April 14, 1903.

Editor American Bee-Keeper:

Los Angeles, California, has been selected by the Executive Committee as the place for holding the next annual meeting of the National Bee-Keepers' Association, and August 18, 19 and 20, 1903, are the dates.

The main reason for deciding on Los Angeles was on account of the low railroad rates in force at the time of the Grand Army meeting at San Francisco, which is held the same week, and the same rates apply to Los Angeles.

Further particulars will appear in the regular official notice to be issued by the Secretary of the Association later on as soon as definite arrangements can be made as to hall for holding the meeting, hotel accommodations, etc.

We may say that San Antonio, Tex., and Salt Lake City, Utah, made honorable strenuous efforts to secure this year's meeting of the National Bee-Keepers' Association, but those who have had the most experience know that in order to have the best and fullest attendance, the meeting must be held when low railroad rates all over the whole country can be taken advantage of, and the Grand Army beats them all in that line. So that fact had great weight with the committee in deciding the matter.

Executive Committee,

George W. York, Sec.

As is quite usual under such conditions, the beautiful weather of March so general throughout the country, was followed by an April more winter-like, and serious losses to bee-keeping interests have doubtless resulted. From information at hand, we incline to the belief that very heavy losses in bees have been experienced in many northern localities during the past winter. The greater, then, is the necessity for care of the remaining stock.

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A red wrapper on your paper indicates that you owe for your subscription. Please **give** the matter your early attention.

Editorial

The Florida office of the American Bee-Keeper has recently enjoyed a brief visit from Mr. D. E. Merrill, of the publishing firm, at Falconer, N. Y.

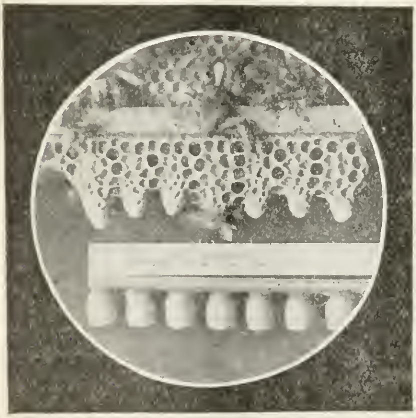
The American Bee-Keeper's thirteenth year is not proving at all "unlucky."

It is now over five years since the writer stepped from the subscription list into the editorial chair of the American Bee-Keeper; and he has great reason to regard with pleasure the circumstances which brought about this change. It has afforded an opportunity to form acquaintances with thousands of bee-keepers, and called for a constant correspondence with this vast circle of newly acquired friends. Our humble efforts to serve the fraternity have been a source of constant pleasure, made doubly so by the appreciative response to which our subscription list attests. During this, our sixth year, we most earnestly desire to join hands with the bee-keepers throughout the land in the interests of our pursuit—see if we cannot induce our subscribers to contribute more freely their ideas in regard to bee-keeping matters. In a multitude of counsel there is wisdom, and the counsel of the beginner, if not always entirely practicable, is often valuable and leads to the agitation of interesting subjects by the more experienced. We want the reader to feel that The Bee-Keeper is his representative journal, and that its columns are open to him for the presentation of his apiarian thoughts. We want every interested reader to tell us what he likes best about the paper, and to offer suggestions for its improvement. Every suggestion received will have due consideration, and where practical will be adopted. If each present subscriber could but send us one new subscriber, we would thereby be enabled to greatly improve the present style of the journal. We believe this could be done with less effort than is generally imagined. Whether you can favor us with the new reader or not, we shall hope for at least a short item from each during the season. Will you help us?

Nothing connected with agriculture responds more readily to careful attention and intelligent manipulation, than bees. As with fruits, grain, vegetables, etc., there is sometimes a failure due to causes over which the apiarist has no control, and therefore such failures reflect nothing to the discredit of the manipulator. But failure, through simple neglect to avail ourselves of that which nature bestows, as is too frequently the case, is criminal.

REARING GOOD QUEENS.

Mr. Greiner in this number makes some interesting observations in regard to the results of natural selection, as tending to uphold the standard of excellence in our queens, and the improbability of man's early undoing of nature's work. In its broadest sense, there is evidently some foundation for Mr. Greiner's theory; yet the wholesale methods of today, practiced in commercial queen rearing, as a result of which thousands upon thousands of colonies are requeened annually with stock produced under artificial treatment or improved (?) plans, the undoing might be surprisingly rapid, if it were a fact that modern methods of queen rearing were really productive of inferior stock. There is no means at our disposal at this time by which comparisons between the bees of fifty years ago and those of the present might be made. As to honey-gathering qualities, however, it is very doubtful if any real advancement has been made. Such a suggestion will doubtless be regarded by some as real heresy; but where is the evidence of superiority so generally boasted?



Mr. Alley, in the American Bee Journal presents an illustration of several queen-cells built, he says, by a method with which few bee-keepers are acquainted. The picture is shown, apparently, to display what Mr. Alley considers an unusual amount of wax used in their construction, for he says: "You will see that every cell is large, long and heavily waxed. This latter feature is the strongest indication that the occupant of each cell is as good as can be reared."

Alley has been studying this matter of rearing good queens perhaps longer and on a more extensive scale than any man in America, if not in the world, and his observations carry weight. Yet, he has denounced queens reared by the cell-cup plan, generally, as worthless. In this connection we take occasion to show herewith a batch of cells, reproduced from a small photograph that has been lying around The Bee-Keeper office for several years, which was taken by the editor, and which depicts a batch of cells from artificial cups made by himself. It is evident that, if Mr. Alley's heavily-waxed cells produce queens as good as can be reared, the domestic races are not deteriorating as a result of artificial methods, and that (as the picture shows) cells equally well waxed result from other and better known methods than the one to which Mr. Alley refers.

We are not yet able to shape our faith in heavily waxed cells to coincide exactly with Mr. Alley's view, but believe conditions which have no influence upon the quality of the resulting queen to be largely responsible for the excess of wax frequently observed in the construction of cells, regardless of the system employed in their development. That is to say, a strain of bees which is prone to build burr and brace combs excessively will be more liable to finish cells of this style than are the others. Closely grouping the cups has also a tendency towards the same result. Crowded apartments combined with a flow of honey are conditions which yield a larger percentage of heavily waxed cells than a roomy hive and scanty forage.

Just now we are particularly fortunate in having several deep-thinking investigators at work upon these problems. Doolittle, Alley, A. C. Miller, Pratt, Greiner and many others, are helping us to a better understanding of the subject, and it is hoped that valuable facts may be developed and established while the matter is up for discussion.

By the death of Mr. Newman, another vacancy is created upon the National board of directors.

Marking Our Shipping Packages.

Considerable has been written in the several bee journals of late in regard to the propriety or advisability of producers marking shipping packages with their name and address. The following from Secretary Howard, explains itself, and is doubtless an outgrowth of the discussion:

Romulus, N. Y., April 3, 1903.
Editor American Bee-Keeper:

I hand you herewith the following resolution:

Resolved, That this, the New York State Association of Bee-Keepers' Societies, in convention assembled at Syracuse, March 10, 1903, recommend and urge the bee-keepers to place their name and address upon the packages containing their honey, both comb and extracted, and that this resolution be forwarded to the bee journals for publication.

Yours truly,
C. B. Howard, Sec.

In many instances it is desired to develop a trade for our individual product, or for that of a certain association of bee-keepers. In such cases, it is important that some mark be used as a designating brand, so that the consumer may know specifically what he is buying, and thus be enabled to place duplicate orders for that which suits him, or to avoid that which has not been regarded with favor. This method necessitates the placing of our product directly with the retailer or in the hands of the consumer, and is, doubtless, the most profitable plan where practicable. However, if sales are to be made to the "middleman," such as a wholesale grocery firm or those who habitually repack the goods under their own private mark, the placing of the producter's name upon the package availeth naught, for neither the consumer, nor the retailer will be permitted to look upon that name.

Under existing conditions, many producers find it advisable to avail themselves of the ready cash market afforded by the middleman, and thus divide profits and labor of seeking better prices. While this plan is often the most expeditious one of realizing upon a crop of honey, it is rarely the most profitable. The resolution of the N. Y. S. A. B. K. S. is obviously in line with the best interests of the producer, and if closely adhered to, and some effort put forth in the direction of developing a more direct outlet for their product, will surely result in greater profits to the producers of that state

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Last season The Bee-Keeper emphatically protested against the absurd practice of advertising queens the chief merit of which was that they were bred from a mother upon which the vendor had placed an almost fabulous valuation. Our complaint was registered solely in the interest of the inexperienced buyer; and, be it said to the credit of those who first made the mistake of thus attempting to express merit, the practice was discontinued, as a result of our protest. We shall not renew the subject now, and hope to be spared the necessity of ever having to renew it. In view of some misunderstanding now abroad, however, in regard to our former position in this connection, we beg to say that it was never our intention to intimate that a "raiser" of queens might not possess a breeding queen which might be in fact worth hundreds of dollars to him, as a breeder. We do not believe we have a single reader financially disinterested in the queen-rearing business who has misunderstood our argument; but some of those whose financial interests may have suffered to some extent as a result of our plea for its discontinuance are prone to deliver left-handed swipes at this journal, even to this day. Advertising stock from a thousand-dollar queen deceives only the ambitious tyro, often a beginner without means who is honestly struggling to establish himself in a business which he loves and looks forward to, frequently, with fondest hopes, as a life vocation. The American Bee-Keeper has, perhaps, a thousand such readers; and in the interests of these, we repeat our only objection to the practice, that it is taking an unfair advantage of those who are by reason of inexperience unable to comprehend the advertiser's point. We do not worry for the old, experienced "bee-man." He'll look out for himself; never fear.

While it is doubtless a fact that bees left entirely to themselves often prove more profitable than do those which have been the victims of constant disturbance, without a knowledge of their requirements, the additional fact remains that under careful attention to details directed by an experienced hand, they may be made doubly profitable. Not that the bee-master exercises any magic wand or influence whereby the bees become more active at honey-gathering, but that the experienced eye readily recognizes the general and specific conditions existing, and a chain of thought linking together the various causes and effects responsible for these conditions, inadvertently flit through his mind, and guide the hand which administers the treatment. A single reading—or a dozen readings—of any text-book, or the monthly perusals of a bee journal, alone, cannot qualify the student to take the best possible advantage of the various problems which present themselves. It is only by familiarizing ourselves with the practical side of the question that the strain of mind is relieved and the apiarian work pursued with a feeling of confidence.

Under the active leadership of General Manager France, the National Association is progressing "beautifully," notwithstanding the evident determination of certain individuals to breed discord and consternation. We wish every bee-keeper in the land might be able to recognize the great advantage to himself and the fraternity to be gained through membership in this, the greatest and strongest association of bee-keepers in the world. If it were so, our fraternal rights and interests would be at once recognized by the national government and others. Considering the fact that it costs but one dollar a year for the enjoyment and satisfaction to be derived from such a condition of affairs, it seems that we are justifiable in anticipating an early consummation of the end so much desired.

The honey-dealing firm, Fred W. Muth Company, of Cincinnati, announce that they have discontinued the practice of quoting inferior honey as "Southern," and that they will do so no more. In behalf of the progressive producers of the South, The Bee-Keeper tenders its assurance of appreciation, and guarantees that the act will be appreciated by those who have heretofore been obliged to labor under the stigma placed upon their goods by this exceedingly unjust practice. If any of our readers know of another firm of honey buyers, dealing direct with the producer, who still adheres to this old-fashioned method of quoting honey, we shall appreciate being put upon its track.

Mr. Thomas G. Newman, for many years editor of the American Bee Journal and general manager of the United States Bee-Keepers' Union, died in San Francisco, California, March 10, 1903. Mr. Newman was one of the most popular apiarian writers and association workers of America for many years. We recall with feelings of sincere gratitude the kind personal letters from his friendly pen received some twenty years ago when the bee-fever of our youth was taking root. Mr. Newman's demise was due to gastritis, and he was 69 years of age. His memory will ever be revered by those whose pleasure it was to know him.

The queen-cell register shown in this number of The Bee-Keeper, though yet incomplete, is an interesting product of the versatile mind of that inventive genius, "Swarthmore." When perfected, it will doubtless be the most convenient and practical of cell registers. The automatic computation of dates is a feature of especial value, and the positive manner of registration is particularly pleasing.

The decency to give credit to others when re-printing articles, is a matter that should lie very near the conscience of every editor. It does not detract from the position of any paper, to acknowledge in full the brain work of a contemporary.—Trade Press List.

Our readers are promised something rare, in a short series of letters treating upon what the author tems, the "Odor-of-Direction," a fascinating theory which has to do with the life and language of the bee.

The Jamaica Times says that last year, up to March 28, the Jamaica Bee-Keepers' Association had shipped five barrels of honey. At same date, 1903, four hundred barrels had been shipped since the beginning of the year.

WISCONSIN BEE-KEEPING.

From the annual report of State Inspector of Apiaries.

Platteville, Wis., March 31, 1903.

To His Excellency, Robert M. LaFollette,

Governor of the State of Wisconsin.

I have the honor of presenting to you, as provided by law, my sixth annual report, as State Inspector of Apiaries.

UNITED STATES BEE-KEEPING.

The bee-keeping of the U. S. is of great importance as is proven by the last U. S. Census Report, vol. 5, part 1.

Seven hundred and seven thousand, two hundred and sixty-one bee-keeping farms, containing 4,109,620 colonies or swarms of bees. They produced 61,196,160 pounds of honey and 1.765,315 pounds of wax. Valuation of bees, $10,186.513, of honey and wax, $6,664,904.

WISCONSIN BEE-KEEPING.

Although some states have more bees and produce more honey, none produce a better quality of honey, nor will records show a greater profit per colony than those kept in the Badger State

Ten thousand, five hundred and thirty-three bee-keeping farms, containing 106,090 colonies of bees.

They produced 2,677,100 pounds of honey and 44,870 of wax.

Valuation of bees, $377,105, of honey honey and 44,870 of wax.

One-sixteenth the total number of farms in Wisconsin have bees, and produced 16 pounds of honey for each bushel of apples raised in the state, three pounds of honey for each bushel of strawberries and 31 pounds of honey for each bushel of clover seed.

A colony of bees for each nine head of sheep, or milch cows in Wisconsin.

Many carloads of honey are used by Wisconsin bakers, also largely used in manufactures, such as candy, etc., even to the making of honey vinegar for large pickle factories, also in making wines.

The season of 1902 in Wisconsin was too cool and rainy for a good honey harvest, but was more favorable for the spread of various diseases among bees. I inspected 145 apiaries, and found 35 per cent. had foul brood, and as many more with other troubles, such as pickled brood, chilled brood, starved brood. In the above apiaries of 8,108 colonies of bees, I found 681 infected with foul brood, a contagious and fatal disease among bees. I also found 570 infected with pickled brood, many colonies weak and starving.

RESULTS OF INSPECTION AND TREATMENT.

July 1, in the evening, I inspected an apiary and found every hive infected with foul brood. I gave careful instructions how to treat the bees, which the owner did next evening. I reinspected the apiary 24 days later and found every hive healthy, with full drawn combs of brood, hives full of honey and 48 little section boxes per colony of choice basswood honey to spare.

June 4, I inspected an apiary that last year had 200 colonies of bees and harvested 12,000 pounds of choice comb honey. To better increase his bees the owner bought some brood combs. Not knowing they were diseased, he used them freely, and also was careless about old combs, foul brood had reduced the apiary to six diseased colonies. In the apiary I found uncovered barrels and boxes containing diseased combs, and robber bees from several apiaries carrying home the diseased honey. Within two miles I found an apiary with half the colonies dead and the rest diseased. After treating them, I followed another line for four miles and found another apiary, with only two live colonies out of 90.

One bee-keeper bought several combs of sealed honey from an apiary where bees had died. Not thinking of any danger, the combs were used, and in time foul brood apeared. I was called at first appearance and the disease stopped at once.

May 12 to 16, I inspected several apiaries that a year ago were diseased, and treated, and now each was in perfect health and bees working nicely.

I also inspected two apiaries where the owners were not very careful in treating their bees, and I found some disease there. I at once treated the bees. I find it hard to get careful bee-keepers to treat bees. A little carelessness will cause great mischief.

BULLETIN No. 2.

There being need of better methods of handling bees, and to leave full printed instructions how to successfully treat diseased bees, May 23 I issued 1,000 copies of Wisconsin Bee-keeping Bulletin No. 2. The cost of the same was $110.00 including a few half tone cuts and the expressage on several borrowed cuts. There are at least 11,000 bee-keepers in Wisconsin. This bulletin should be in the hands of every Wisconsin beekeeper. As the total expenditure for such purposes shall not exceed five hundred dollars per year, which shall pay salary and all other expenses, I was compelled to save the balance to treat bees. A bill has been introduced in the legislature asking for $200.00 per year more to suppress diseases among bees in Wisconsin. The amount asked for is very light, but after six years of testing I believe it is necessary.

IMPORTING DISEASE.

Each year several apiaries from other states or Canada are imported into Wisconsin and in them, also in shipping cages of imported queens, are germs of foul brood. It will therefore be necessary to keep an inspector to protect beekeeping, the same as a state veterinarian to protect the live stock of the state.

BEE-KEEPERS' INVESTMENTS IN WISCONSIN.

In Reedsburg are two residences, costing respectively $1,200 and $2,000, belonging to an aged bee-keeper. Each was built with the returns of one season's honey harvest. At Dilly is a $2,500 residence, from two years' harvest. At Monroe, a barn 40x60, costing $1,280. Another in Sauk county, each built with the returns of one season's honey harvest. In Clark county, a little farm and 400 colonies of bees worth $10,000 paid for by 16 successive honey harvests.

In 1875, Adam Grimm received $10,000 for honey and bees sold, reserving 1,400 colonies. Four hundred thousand pounds of honey is the total amount my bees produced in 16 successive years.

Yours respectfully,

N. E. France.

Excellent Advice.

The following excellent advice is extracted from a bulletin on "Bee-Keepers' Rights," recently issued by General Manager France, of the National Bee-Keepers' Association. While the suggestions are offered for the guidance of members, it would be well for every bee-keeper to "read often, think much and inwardly digest:"

TO THE CITY BEE-KEEPERS.

There are many keeping bees in the suburbs of cities, and whose bees are an annoyance to neighbors.

1. Spotting Cloths.—This is generally worst the day bees are set out on summer stands. Bees go only short distances at that date. It is best not to set the bees out on wash days, but the day following; by next week the trouble will be over. If they must be set out and it is wash day go to the neighbor who is washing, explain the situation and offer a present of some honey if they will delay washing one day.

2. At Watering Places.—Always provide abundance of water in several places for bees. Shallow, wooden dishes with sloping sides, with a slatted board float, is a good form of watering dish. Somewhere have some salt, also air slacked lime which bees can go to. There is something about it bees like, and it will save trouble to supply the bee's demands. If your bees bother a neighbor's pump, go and put a piece of cheese cloth over the spout and fence the bees out as well as furnish a strainer for the water. Stock tanks are places of annoyance. Just above the water line on inside of the tank fasten a 3-inch strip, it will not bother the stock, and will keep the bees from going there. Also see to it that overflow is so arranged as to not make a mud hole near the tank.

3. In the Neighbors' Garden or Field.—If your neighbor or his horse is stung by your bees in his garden or field, I find it a good plan to donate some honey, at the same time ask him to do such work on cool days or early mornings. If he is unable to keep the ground clean then some early morning surprise him by taking your own horse and cultivate for him up to breakfast. Generally one such act will establish such good feelings no farther trouble will arise. I have proven it so.

4. At Grocery Stores and Residences in the Fall.—After the honey season often bees are a great annoyance at above places, especially in empty sugar and sirup barrels, and candy shops. Go to those places and ask to place the

packages where bees cannot get to them. Go to sugar cane mills and keep the premises cleaned up,-and to neighbors' kitchens where bees come in and bother while canning fruit, and ask them to keep the door and windows screened while at such work. Bees do not go where sweets do not abound.

5. In the Highway and the Public Places.—If people or teams are stung in such public places by your bees it is your duty to so locate the bees, or change the surroundings that they do not disturb the public. If damage to person, stock or property is done by the bees, the owner is liable for damages. And if it continues, may become a nuisance. High board fences, or high hedges are a great help. Even with all possible precaution if bees are near the street, the bees will at times bother. Keep out of trouble if possible. Don't get the idea that the National Association can win every case. We must keep within the law if you want protection. Avoid conflicts, compromise, and live up to the Golden Rule.

N. E. FRANCE.
General Manager National Association.

As will be seen by referring to the notice issued by Secretary York and published elsewhere in this number of The Bee-Keeper, the next annual meeting of the National Bee-Keepers' Association will be held at Los Angeles, Cal., August 18, 19 and 20, 1903. Los Angeles is one of the most charming cities of the Pacific coast country, and is situated in the midst of an excellent honey producing territory, near the western foothills of the Rockies, with orange groves and oil wells galore adjacent. Visiting bee-keepers from the east will find no lack of interesting sights about the city of the angels.

As we go to press we learn, through the American Bee Journal, that Dr. E. Gallup, the veteran bee-keeper, died at his home in California on the 5th ultimo.

"L'Apicoltore," published at Milan, Italy, is a well gotten up bee journal which comes regularly to us. It would doubtless be very interesting—if we could read it.

HONEY AND BEESWAX MARKET.

WASHINGTON GRADING RULES.

Fancy.—All sections to be well filled, combs straight, of even thickness and firmly attached to all four sides; both wood and comb unsoiled by travel stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy white," "No. 1, dark," etc.

Kansas City, Mo., April 8.—The supply of comb honey is light, with good demand. Prices of comb, white, 15c., Dark, 12 1-2c. Extracted is in light demand, with heavy supply at 6 to 7 1-2 cents. Beeswax, good demand at 30 to 32 cents. Supply light.

Hamblin & Sappington.

New York, April 7.—Large quantities of comb honey are offered at low prices to dispose of it. The supply is more than sufficient, with fair demand. We quote comb, 10 to 14 cents. Extracted, 4 1-2 to 5 1-2 cents. Beeswax is in good demand and scarce at 32 to 33 cents.

Francis H. Leggett & Co.

Chicago, April 7.—Choice to fancy comb honey sells in a limited way at 15 to 16 cents. There is no certain price for other grades, but they sell slowly at 3 to 5 cents less per pound. Extracted, 6 to 7 cents for white grades, amber, 5 1-2 to 6 1-2 cents. Beeswax wanted at 32 cents.

R. A. Burnett & Co.

Buffalo, N. Y., April 7.—The supply of fancy honey is light, and the demand is better than is usual for April. We advise clearing up honey now. Some poor grades are selling at 10 to 12 cents. We quote fancy comb, 15c. Extracted, 5 to 8 cents. Beeswax is in good demand at 28 to 32 cents.

Batterson & Co.

Cincinnati, O., March 11.—The demand for extracted honey is good at the following prices: Amber, barrels, 5 1-2 to 6 1-2 cents, according to quality. White clover 8 to 9 cents. Fancy comb honey 15 1-2 to 16 1-2 cents. Beeswax strong at 30 cents.—The Fred. W. Muth Co

We are in receipt of a letter from Mr. N. E. France, General Manager of the National Bee-Keepers' Association, Platteville, Wis., in which he states that in a train wreck two mail bags were burned which doubtless contained a number of packages of literature addressed by him to members of the Association. These packages contain interesting information to bee-keepers, and Mr. France requests all members who may fail to receive these circulars and leaflets to notify him, so that others may be sent at once.

SAY, ALL BEE-KEEPERS, ONE QUESTION, PLEASE.

If you were offered a hive that would save you one-half of your time and labor in its manipulations; one that would save you more than $1.00 per hive in the cost of extra equipments; one which received diploma at the Pan-American; or a double walled hive for the price of a single wall hive would you not investigate its claims or merits? MASSIE'S TWENTIETH CENTURY DOUBLE-WALL IDEAL COMBINATION has all the above grand features and more too. Then why not be on time and send for descriptive circulars today?

It is the best "all-purpose" hive, the nearest perfect; has more conveniences for the apiarist; better suited to the welfare of the bees; has more good principles with fewer objections than any hive in existence.

"THE QUEEN BEE"
tells how to rear the
BEST OF QUEENS;

tells the cause of and remedy for injury in shipment; how they may be directly introduced with positively no risk of loss or injury. It gives much other valuable information. See The Review for February, pages 48 (excuse the errors on that page) and 60. The hive and book are two of the grandest "hits" of the age. Order copy of book today. Price 25 cents and your money back if you are not satisfied.

T. K. MASSIE,
Tophet, W. Va.

A SCIENTIGIC RECTAL TREATMENT
NEW METHOD WHICH INSURES A CURE

Most Stubborn Cases Cured in 30 Days.

SURE CURE FOR **FISSURE, PILES, FISTULA and CONSTIPATION**

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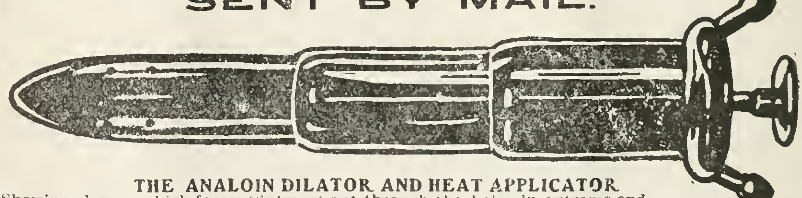


THE ANALOIN DILATOR AND HEAT APPLICATOR
Showing plunger which forces Ointment out through the holes in extreme end.
The syringe is attached to the nipple having largest hole and hot water passes between the outer wall and the tube containing the ointment, thus thoroughly heating the outer surface of the Dilator and passing out of the smaller nipple.

The Analoin Rectal treatment is now a demonstrated success and the hundreds cured are strong in their praises of its merits. The wonderful ointments which go with this treatment are the same as used by the greatest rectal hospitals in the world and the instruments used are patterned after those in use by the most successful rectal specialists, only designed for use at home and to save the needless expense of traveling to some distant city.

If afflicted with Constipation, Piles, Fissure or Fistula, send us your name on a postal card and we will mail free an illustrated book about our treatment and a symptom blank, which, when properly filled out, will entitle you to an opinion on your case free of cost. Do not waste any more money on worthless patent medicines for these diseases, but write us at once and learn of this new scientific method which always cures when recommended by us.

ANALOIN APPLIANCE CO.,
512 Shukert Bldg. - - Kansas City, Mo.

If you have a good idea, tell it to others. We'll print it.

Ask for desired information from the craft, through The Bee-Keeper.

Cent-a-Word Column.

It frequently occurs that some member of the Bee-Keeper family desires to advertise for sale some article the value of which will hardly justify the payment of our regular rates; and yet it would be an accommodation if he were permitted to tell others what he has to offer. Some other reader may be in need of just such an article as that of which he wishes to dispose. Again, it is as frequently desired to exchange commodities for which we have no especial use, for something more desirable, and such exchanges are often made to mutual advantage. We have, therefore, decided to place at the disposal of our readers a column devoted to the accomplishment of these ends; though we cannot be responsible for any possible dissatisfaction which might arise as a result of such exchanges. The rate will be uniformly one cent for each word, each month; no advertisement however small will be accepted for less than twenty cents, and must be paid in advance. Count the words, and remit with order accordingly.

$40 per month and expenses paid good men for taking orders. Steady work. Apply Protective Nurseries, Geneva, N. Y.

WANTED—To exchange six-month trial subscription to The American Bee-Keeper for 20 cents in postage stamps. Address, Bee-Keeper, Falconer, N. Y.

AGENTS WANTED to sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Jamestown, N Y.

FOR SALE—A Hawkeye, Jr. Camera Complete. Uses both film and plates. Cost $8.00, will sell with leather case for $3.50 cash. Address Empire Washer Co., Falconer, N. Y.

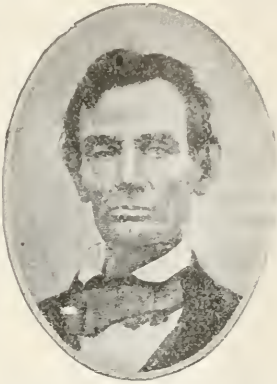
A TANDEM BICYCLE (for man and lady) cost $150, in first-class condition, was built to order for the owner. Tires new. Will sell for $25 cash. Satisfaction guaranteed. Address J. Clayborne Merrill, 130 Lakeview ave., Jamestown, N. Y.

There was a man in our town who thought him wondrous wise; he swore by all the fabled gods he'd never advertise. But his goods were advertised ere long, and therby hangs a tale: The ad. was set in nonpareil (this size), and headed SHERIFF'S SALE.—M. T.

W. M. Gerrish, R. F. D., Epping, N. H., keeps a complete supply of our goods, and Eastern customers will save freight by ordering of him.

The W. T. Falconer Mfg. Co.

Among industrial organs, a small paper that sticks closely to its subject is worth a cartload of the aimless nomads that claim to cover the whole field. Subscribe now for THE AMERICAN BEE-KEEPER.



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1. A beautiful photogravure copy of the earliest portrait of Abraham Lincoln, enlarged from the original daguerreotype now in possession of the Hon. Robert T. Lincoln.
2. Facsimile of Lincoln's marriage license.
3. Facsimile of check drawn by Lincoln.
4. Two Lincoln anecdotes.
5. Description of scene in his nomination in 1860.
6. A Lincoln story.

All the above material is taken from the new

Life of Abraham Lincoln

By IDA M. TARBELL

just published by this Society. This offer is made to enable us to send full information regarding it to Lincoln admirers in each locality. This offer is not made to agents or for agents, but to responsible history and book-lovers only.

Send name, address, and six cents in stamps to pay postage expense, to

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After a man succeeds in publishing a good journal the next step is that of getting it into the hands of the people, of getting them to reading it, and becoming acquainted with its merits. This can be done by advertising, sending out sample copies, circulars, etc. All this costs money. I think I am safe in saying that for every new subscriber I have received, I have paid out $2.00 in advertising; hence I have often said that a publisher of a good journal could afford to send his paper one year free, for the sake of getting it into new hands. It would cost no more than other forms of advertising and would be very effective, but, for obvious reasons, this plan could not be put into practice, but I am going to come as near to it as I can. I have ebtween 200 and 300 complete sets of back numbers for the present year, and as long as the supply holds out I will send a complete set, and the rest of this year free, to any one who will send me $1.00 for the Review for 1903. For a few particulars regarding the numbers already published this year, read the following:

There is not room here to say very much about the back numbers for this year, but I will mention one prominent feature of each issue.

JANUARY is a Colorado number; six pages being devoted to a beautifully illustrated "write-up," by the editor, of that paradise for bee-keepers. This issue also shows how to make a cheap hive-cover that will neither split, warp, nor leak, in any climate.

FEBRUARY contains the beginning of a series of articles by M. A. Gill, who last year managed 700 colonies of bees, and produced nearly two carloads of honey. These articles are written from the fullness of his experience.

MARCH has an article by S. D. Chapman, on "What Makes Bees Swarm, that I consider the best I have seen on the subject. It gets right down to the foundation of the matter. In fact, so thoroughly does Mr. Chapman understand the matter that he has so made up a colony that one half would swarm, leaving the combs deserted, while the other half would not budge.

APRIL ushers in some typographical changes. The smooth, shiny, glazed paper was laid aside for a soft white paper that gives to printing a clean, tasty, tempting look. The frontispieces are printed in colors instead of somber black. The cover is of Court Gray printed in two colors—Umber and Milori blue.

MAY contains a five-page review of a book by E. A. Morgan, entitled "Bee-keeping for Profit." It was rightly named, the author getting right down to basic principles, and giving the chit of profitable honey production, particularly in the Northern States.

JUNE shows how a man may practically defy foul brood; how he may keep bees in a foul-broody district, all surrounded by diseased colonies, yet keep his apiary so free from it and its effects as to secure a good crop of honey each year.

JULY has an excellent article by Mr. Gill on the management of out-apiaries for the production of comb honey, showing how the work must be generalized, yet systematic, and done just a litttle ahead of time.

AUGUST illustrates and describes the handiest and best bee-tent for circumventing robbers that I ever saw. It also has an article by Mr. Boardman on "shook" swarms, showing how we may practically take swarming into our own hands.

SEPTEMBER illustrates and describes a cheap but substantial bee-cellar, built something like a cistern with a roof over it. This issue also gives some of the best papers read at the Denver convention, together with a lot of interesting items picked up at that convention.

OCTOBER gives a three-page illustrated write-up of Dr. Gandy and his artificial pasturage. While on his way home from the Denver conventon the editor of the Review spent three days with Dr. Gandy, using his eyes, ears, and camera, and this write-up is the result. If you want to know the truth of the matter, read this issue.

Remember that each issue contains dozens of interesting and instructive items aside from the ones mentioned.

Send $1.00, and the back numbers for this year will be sent at once, your name put upon the subscription list, and the Review sent to the end of next year.

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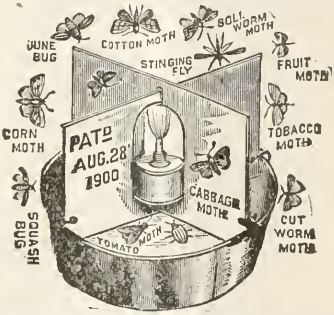

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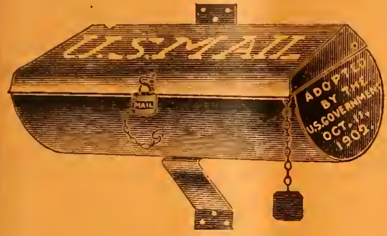
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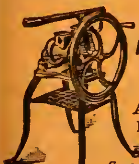

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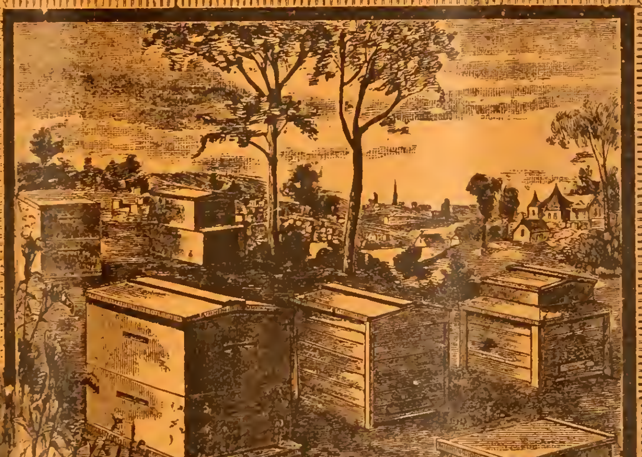
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JUNE

1903

VOL. XIII NO. 6

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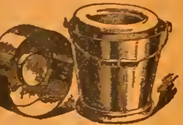

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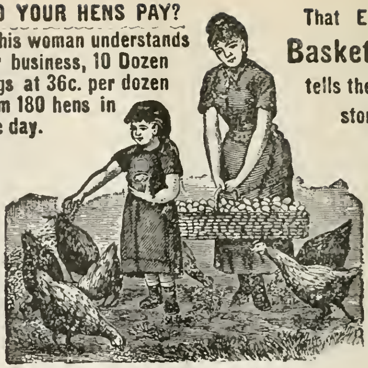

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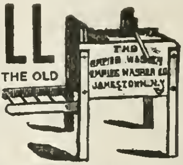
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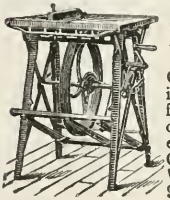

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work the cube is the nearest approach to it. But is such a form actually the best? The best in brood rearing, in honey production and in wintering? For honey production the rectangular hive which is slightly shallower than it is long or broad obtains widest use and variations from that form may be traced most frequently to one cause, namely: belief in the securing of better wintering. Such belief is based on the claim that under natural conditions bees always put their stores at the top of the cavity they occupy and cluster below it. As most natural cavities in which such tendencies are seen are tree cavities, there is little other place for the bees to put sufficient honey for winter needs. Such being the most frequently observed method the inference was that above and not at sides, back or front was the natural way.

When bees are in cavities longer and wider than high, what do they do? They put the honey at that part of the cavity farthest from the entrance and form their winter cluster between the honey and the entrance.

Having first noticed these peculiarities in colonies which I have taken from buildings I began experimenting to discover what the law or habit of the bees was, and to avoid wearisome details I will omit a description of them and give the results only.

Broadly speaking, a hive as long as wide should be twice as high to give the most ideal conditions for wintering with stores above the bees, but the breadth and length have definite limitations. For a "shallow" hive the width and height should be only great enough to permit the cluster which forms near the entrance to touch the sides, top and bottom, and long enough from front to rear to allow for needed stores. Or stated differently, the "shallow" hive to give ideal conditions should be twice as long from front to rear as it is high or wide, but its height should not be great enough for the storing of much honey above the cluster.

With the flat solid combs we use in order to create ideal conditions, it is necessary in the shallow hive that the combs run from front to back. In a natural state bees leave so many passages that they can and do work back on the stores without breaking cluster, even when all combs are not so built.

Please note that the foregoing applies particularly to out of door conditions. Bees wintered in a cellar are not under normal conditions. They can break their cluster or change its position within the hive readily without loss of much heat or endangering their lives.

A colony's winter cluster is a fairly compact and nearly spherical body and largely confines within it, the heat generated. It draws to one side or the top of a chamber not to get against a warm (?) wall or cushion but to avoid drafts around it. There is no warmth in a cushion. There is nothing warm about it or a chaff wall to cause bees to draw against it. Where a hive chamber is relatively too large for the contained cluster they move to that part of it where they least feel the wind and cold. Put a plain cover on and let it be well sealed and if the chamber is too large for the cluster they will be found against the cover, not against any chaff cushion at side or bottom. If one wall was chaff-packed and the other was not, the bees might be found nearer the packed side than the other because the down draft of chilled air was less. But as a matter of fact, they almost always have a comb between their cluster and the hive side.

In considering the foregoing let the reader distinctly understand and remember that the cluster of bees does not keep the whole hive chamber warm in winter, but only the cluster and the air immediately in contact with it. The slow movement of this slightly warmed air does in a very slight degree modify the temperature within the chamber but it is so slight as not to be worth considering in connection with the problem of hive shapes.

From the ideal type we may vary considerably and still secure good results but the more nearly we keep to the proportions I have stated, the better. A divisible brood chamber hive enables us to have a shallow brood chamber for the honey crop and a deep one for wintering. It is the most easily elastic hive yet devised and slowly the bee-keepers are coming to see the value of what Mr. Heddon so earnestly, so long and so persistenly championed.

Providence, R. I., April 30, 1903.

GETTING A START.

How a Young Man Without Capital May Surround Himself With an Apiary.

(E. F. Atwater.)

YOUNG MAN, (the one with a small apiary in the back yard), you want increase, but bees and hives cost money. Perhaps a few suggestions from my experience may help you.

Formerly I lived in South Dakota where black and hybrid bees were kept by the farmer-bee-keepers. I bought (worked a week for one fine breeder) queens of Italian stock and Italianized my bees. On any and all occasions I called in the farmers who were interested and showed them my bees. The breeding queen mentioned above was a wonder, her bees fine workers and remarkably gentle. When showing this colony I never used smoke or veil and so quiet were they that, if the hives were carefully opened and frames removed without much snap or jar, the queen would continue laying right before our eyes. Mr. Farmer was almost invariably anxious to have his bees Italianized and this was the plan: When his colonies became fairly strong I would go to each and take out a frame of brood and a frame of honey, well covered with bees, but not taking the queen. These frames were put in nucleus hives and taken home, and a ripe queen-cell given to each. When the first queen began to lay and had filled her combs she was removed and another ripe cell given to the nucleus.

These early queens were then introduced among Mr. Farmer's bees, in payment for the frames of brood, honey, and bees. When the second queen in each nucleus began to lay the nuclei were carefully built up to full colonies, and, if the honey-flow continued, sometimes yielded a small surplus, or were again divided.

I always took every opportunity to show the farmer or would-be bee-keeper the tiered-up supers of honey on my hives. Then if he expressed any dissatisfaction in regard to his own honey-crop, I then and there offered to handle his bees on shares, for half the product of honey, wax, and increase. Of course, if you can get bees on better terms, do so.

Don't despise the "puttering" with very small apiaries, unless you can use your time to better advantage elsewhere, as every pound of honey so secured helps to buy supplies. By these and similar methods, working perhaps a day a week and that mostly mornings and evenings while attending school, one can secure quite an apiary at small cost.

For the above plans, and many another, I am indebted to Mr. Thos. Chantey, of Meckling, S. D., who, like Doolittle, seems always willing to give freely the results of his many years' of work and study with the bees.

Boise, Idaho, Feb. 10, 1903.

BEES AND YELLOW JESSAMINE.

Its Poisonous Effect Upon the Bees Sometimes Mistaken for Paralyses, Which in Some Respects it Resembles.

(C. S. Harris.)

I HAVE the misfortune of having within easy reach of my bees great quantities of yellow jessamine, or jasmine, gelsemium sempervirens being its botanical name, I think. In several places the vines cover nearly an acre of ground, while almost every one around me cultivates one or more of the vines because of the beauty of the flowers.

When I began keeping bees here and discovered, in the spring, great numbers of bees dying and dead in front of the hives, I supposed they were stricken with paralysis, and yet the symptoms did not appear exactly those of that disease. Most of the bees effected were the just-hatched, downy ones and they had no trembling motion, but seemed stupefied or intoxicated. The old bees effected had the distended, shiny appearance of bee-paralysis, it is true, but ordinarily they were few, except in queenless colonies or where, for any reason, but little brood was being reared. Very fortunately the queens are seldom effected.

After a few seasons I found that this trouble made its appearance with the jessamine bloom, from which the bees stored some honey and considerable

American Bee Keeper.

THE DEADLY JESSAMINE.

pollen, and disappeared entirely with the end of that bloom. One point that made this more noticeable was that the blossoming of this vine is a movable period, varying with the season from December to March, and even April, remaining in bloom from four to six weeks. I have discussed this trouble with several physicians and all of them say it is undoubtedly jessamine poisoning, having almost the same action upon the bee as the poison extracted from the root of the vine has upon the human system.

A few years ago a bee-keeper from another section on going into my apiary at this season of the year, remarked at once, "I see you have paralysis," but on a closer examination said he was mistaken, it was certainly not paralysis, with which disease he was acquainted. It is bad enough, however, while it lasts, as it keeps the colonies from building up during that time, by destroying the young bees needed to replace the old ones which are wearing out.

This spring my bees suffered more than usual, owing to an extra heavy bloom of jessamine at a time when there was little else for them to work upon.

I suppose the queens are so seldom effected from the fact that they are fed by the bees and in the preparation of the food the poisonous qualities are eliminated, while the young bees, upon hatching, help themselves to the raw nectar and pollen, and suffer accordingly. I have a friend some ten miles distant, whose bees suffer somewhat from this source, but not nearly so much as mine, from the fact that his locality is freer of jessamine, and I suppose a location could be selected in which it would cut no figure.

This appears to be a case where nature fails to protect the insect from self-injury. Instinct, as we term it, seems to be lacking here. I believe honey from some sources is said to be poisonous to man, but whether it is at the same time poisonous to the bees I have never seen stated. Possibly jessamine honey would prove poisonous if we obtained it, but it comes at a time when it is all consumed for breeding purposes.

Holly Hill, Fla., March 20, 1903.

LANGUAGE OF THE BEE HIVE.

An Interpretation of Some of the Most Important of the Signs and Signals Used by Honey-Bees in Communicating With Each Other.—A Better Understanding of the Language of the Bee Should Help in Manipulation.

(Swarthmore.)

COME, let us go to the hives and study the language of our bees. 'Tis true they do not talk in English tongue; yet they speak as plainly as humans, and if we would but listen we could understand.

Let us approach this hive. See, there stand the guards, ever alert. I will place my hand close down by the entrance. Do they not plainly say, by their movement and sudden stand, "take care now!" They certainly do. Bees are fair, they never attack without first giving warning—but we must understand the words. What is this warning? It is a sharp, quick snap of the wings and a sudden stand about, face to the enemy. If we insist upon further intrusion, what then? A bee or two will perhaps dive at us but really not with the deliberate intention of stinging but more to investigate—man is usually the first to declare war, not the bee. She will perhaps light upon the clothing and, if we are quiet, will find nothing to be particularly alarmed at. She will crawl about a bit and at last return to her place by the guards with the message, quite plainly spoken, "no danger." Now let us fight those same bees; what say they now when returning to the entrance? As quick as a flash they return, hug close to the opening and shriek their note of "alarm" which instantly brings to view a phalanx of fully aroused and well armed men ready for any attack. They seldom attack at once, however. We must make further advances. Bees are never offensive, on the contrary they are entirely defensive; and defend they will to the very last of their mature members, heroically—at the expense of life itself.

A puff of smoke will change the tone of "warning" very quickly to one of "fright." We all know the sudden "s-h-r-r-r" of a colony smoked unawares; and then the quiet tone of "submission," and later the combined movement upon the stores of the hive. All this is so well known by those who have ever opened a bee-hive that further interpretation of the language employed by the bees at this time is hardly necessary. But there is a point I wish to speak of here, if you will allow the digression. Some have said bees so gorge themselves when being driven, that it is a physical impossibility for them to sting. This I cannot credit. I believe it to be a misinterpretation. They can sting and would if it was to their advantage to do so. They have no need to sting for they have nothing now to defend but person, and that we know they will never defend. What they had they have surrendered—they are practically possessionless, or believe they are soon to be. All they would own they must needs sacrifice. They have been overpowered and they know it. Resentment to personal destruction would be madness—at least I have credited my bees with this bit of common sense. Returning to our language lesson—

Now let us remove a comb. What say they, those first to discover their separation from the mass? In the plainest of language ever tongued by men they hum their note of "assembly." Now if we observe closely we can quite readily understand the meaning of all this commotion by fanning. It is to transmit that wonderful odor-of-direction; which fluid, by the way, plays a very important part in the language of honey-bees. I spoke of this odor and pointed out its missions years ago in the old "American Apiculturist" but strange enough it was passed over—yet it is the most beautiful feature in all bee communication. This odor and its many, many uses by the bees in conversation, should be as thoroughly understood by the apiarist, as the weight of honey in super, which, naturally, interests the most of us in this day of competition, more than an exhaustive study into the private habits of the bee. One day, if given sufficient encouragement, I shall venture a chapter which will be entirely confined to this marvellous, and, I may say, absorbingly interesting and important subject, which I have called odor-of-direction.

Just to see how many of our crude English words it has taken already to define but a few of the most common phrases in the bee language! There are hundreds more of these phrases you may be assured. Those employed at swarming time, at the loss and gain of queen, in the finding of sweets, during robbing time, etc., etc.,—even elections, in which there is no human-devised jobbery, are actually conducted, systematically, in the bee-hive; say naught of the thousands of little economies apparent to the close student. To cover these only in part would, I fear, try the editor and monopolize quite all his valuable space, so I had better close right here and say, more anon.

Swarthmore, Pa., March 23, 1903.

FROM OUR FRENCH EXCHANGES.

Interesting Notes Gleaned and Translated for The Bee Keeper by Adrian Getaz.

BEES AND RED CLOVER

Mr. R. Chas. Perin, (L'Apiculteur February, 1903,) passing one day by a field of red clover noticed that a number of bees were gathering honey there. Knowing that as a rule, bees do not gather honey from red clover, he decided to investigate.

He found it somewhat difficult to make observations, but finally discovered that the bees invariably introduced their tongues, not inside the flower, but between the corolla and the calyx. Furthermore, that the flowers on which bees were found sipping the nectar, had been punctured near the base of the corolla, and the nectar was escaping through the puncture.

Next thing was to find who did the puncturing. Further observations revealed the presence of at least four different kinds of bumble bees, probably more. Only one kind, of medium size, a gray-white body, took the nectar from the opening; all the others took it through the punctures they had made, or which were already made. He could not discover which kind made the openings, as nearly all the flowers were found punctured.

I wish to add that there is quite a number of different species of bumble bees, and the European species are not the same as the American. However, the idea struck me that it would be well to investigate which kinds puncture the red clover flowers, and introduce them. This would enable our bees to obtain the red clover nectar, and also increase the yield of seed.

SAINFOIN.

Three forage plants are very extensively cultivated in Europe. Red clover, alfalfa and sainfoin. The sainfoin more probably than the alfalfa, or at any rate not less extensively. By long experience, the Europeans have found that the alfalfa must be cut just before blossoming in order to give the best hay. With the sainfoin it is the reverse; it must be cut just at the closing of the blossoming period.

In very rich lands the alfalfa yields the most, but in grounds of medium fertility, the sainfoin is the best. However, the soil must contain a large proportion of lime, either natural or applied, and if not permeable, must be deeply subsoiled, as the sainfoin is also a deep rooted plant.

In a great part of Europe, the land is so thoroughly cultivated that the natural resources of nectar have practically disappeared, and in many portions the sainfoin is the main supply of honey. It is cut twice a year and therefore gives two separate yields of honey, each lasting about twenty-five days. The second yield is somewhat uncertain, as sometimes the weather is too dry.

FOUNDATION

In looking over the illustrated advertisements of the French bee-papers I note that the foundation is sold there often in rolls, the apiarist cutting it himself in proper lengths.

COLD AND WARM FRAMES.

It is often insisted in Europe that the frames placed across the entrance are warmer than those running from front to back. At first sight it looks ridiculous; yet when the wind strikes at the entrance it can blow clear to the rear between the combs placed lengthwise, while the frames placed across obstruct it. Mr. E. Laglaine, (Revue Eclectique February, 1903,) discusses the question of warmth and ventilation thoroughly. Among other interesting points, he says that there is no need of top ventilation, and that the entrances do not need to be very large (in winter), because the carbonic acid produced by the respiration, being heavier than the air, will, so to speak, fall down to the floor and escape through the entrances. This point is certainly worth considering.

POLLEN IN THE SPRING.

Often in the spring, there is not enough pollen to be had for all the brood that could be raised. Often also, the weather is too bad for the bees to take the flour outside. Mr. Leon Bierlaen (Le Progres Apicole, November, 1902,) advise to throw some flour between the combs. The bees will take care of it.

INTRODUCING QUEENS

Mr. Fitzhoff, (Journal de l' Abeille rhenane), says he put the caged queen in the hive. Next day, he takes the cage (queen included) puts it in a cup of cold water and then turns the wet queens loose. He says he has never lost a queen, even when introducing to colonies with fertile workers. Though he does not say so, I presume that the queen is alone in the cage, without candy or attendants.

APIFUGE.

In a quart of boiling water put one ounce of carbolic acid (crystals) and one ounce of glycerine. When needed, wet a cloth with the mixture and put on the supers to be cleared. A few minutes will empty them of all the bees.

DRONES OR NO DRONES.

L'Abbe Martin (L'Apiculteur November, 1902), asks whether it is well to curtail the production of drones, as much as is generally done, or rather claimed. He goes over the well known arguments, pro and con, and finally gives his opinion that the amount of worker eggs that a queen can lay may be limited, and that the suppression of some four or five thousand drones might not mean an increase of some six or seven thousands of workers, but simply a loss of drones and a loss of the heat they produce, thereby forcing a portion of the field worker to stay at home.

DO BEES MOVE EGGS?

Mr. Gallet (Apiculteur) says yes. In July 1889 he introduced a queen in a wire cloth cage without attendants and without food (the usual process in Europe) to a colony having no unsealed brood. Some accident prevented him from releasing the queen until four days later. To his surprise, he found eggs in several of the cells around the cage. He supposes that the queen dropped her eggs which fell through the meshes of the wire cloth, and were carried by the bees into the cells.

PARAFFINE AND WAX

The adulteration of wax with paraffine is not often practiced here, but it may be well to know how to ascertain the fact.

Heat the suspected wax in a porcelain vessel with a large quantity of concentrated sulphuric acid. There will be a considerable foaming. Keep the heat a few moments yet and let cool. The wax will be transformed into a semi-liquid black residue; while the paraffine will remain intact, come on the top and solidify. The acid must be as concentrated as possible, otherwise it would act only very slowly and imperfectly on the wax. It must be in excess, otherwise the residue would be too thick and retain the paraffine. A portion of the paraffine remains in the residue even then. A mixture of 50 per cent. of paraffine gave only 45 at the end, and a mixture of 75 per cent. only 68. (From Le Rucher Belge.)

Knoxville, Tenn., May 1, 1903.

PUTTING THE NAME OF THE PRODUCER ON HONEY PACKAGES.

(W. W. McNeal.)

THERE still remains a wide discrepancy, it appears, in the views of many of the leading producers and the dealers in honey as to the rights of the former in putting his name on honey packages. I have acted in the capacity of both—a producer and a dealer in honey to some extent and, though I am inclined towards the dealers' side of the question, I am open to conviction.

I am in full sympathy with any movement that will foster the best efforts in the field of production; but I believe that skill and labor honestly performed is best rewarded by the natural results of its own merits. That which is right cannot be made more so by showing petty favors. These only serve to break down in human nature those sterling qualities that impel one to do right for rights' sake. The producer who contends that he is robbed of his rights when he is denied the privilege of ornamenting small honey packages with his name and address, when such are not to be delivered to the consumer by himself, is certainly laboring under a mistaken idea of what constitutes justice in the art of trade. He may feel a pardonable pride in the excellence of his goods, but he should not allow his pride to lead him to trespass on the other man's rights. He should not insist on having all the glory and profits, too, when he reaps the benefits of a wholesale disposal of his crop to the dealer.

The dealer who caters to the retail trade has much to contend with and he should be given a clear title to his purchase, unincumbered by the name and address of the producer. When he has succeeded in creating a demand for honey in this more expensive way, his name is the one for the lovers of honey to become familiar with. When he has paid for any given number of pounds of honey he should be accorded the right of his own name on his (then) own goods if he chooses to exercise that right just as truly as though he were to purchase any other of the farm products. This is only playing fair—only giving him a chance, and in no wise can it be said to be a slap at industry and a defeat of those principles of justice and right which inspire to a betterment of present conditions.

The legitimate stamp of quality is the one for the producer to use indiscriminately when he commands the buyers in the markets for a wholesale purchase of his crop. But if he works the retail trade he has a right to an unlimited indulgence of his fancy and wield the influence of his name on the goods in the full measure of its weight.

Why should a man be given any more rights in this respect when selling honey of his own production than if he were to buy it of another to use as merchandise? Why should the producer be given a free use of the dealers' best efforts at establishing a trade in honey when the advertisement is productive of gain to him? In no wise does his name on the goods benefit the specialist dealer, but rather it is an impediment to him. The producer being the recipient of all the advantages thereof he should not object to a just compensation for the service performed. Would he recognize a counter claim on the part of the dealer which might compromise the sale of future crops?

Sordid propensities are hard to banish even though we deluge our inner composition daily with the crystal juices of the flowers.

If this marking of the section boxes is right with the producer of comb honey it is also right with him who produces extracted honey and the dealer who bottles his purchased goods, with much care must shoulder the other man's burden and put on the name of the producer. When thus encumbered the dealer becomes the servant of the producer. The more proficeint he is as a salesman the more grievious the burden; for when he has set the pace in the markets for the honey of a certain producer, he may see the fruit of his toil plucked by another for said producer claims the right to sell to whomsoever he will.

This seemingly modest assumption of the producer of his rights is made such only by degree. To follow up the principle it would mean the ultimate defeat of the dealer, for in every possible way he might advertise, the name of the producer must be toted along. If he were to contract a year in advance for honey and wished to advertise through the press, he must pay for the added space that the name and address of the producer would require. In short he must see to it that the glory of the producer swallows up the glimmer of his own little light. The general demand for honey will not be increased nor the sales of it augmented by muzzling the hopes of the dealer. When left entirely to his own jurisprudence he will seek the various avenues for reaching the homes of the consumers with his product in a much more effective way. Upon the other hand, if there is any deterioration due to mismanagement or possibly misuse of the goods what pre-eminence hath the producer as a market builder?

When honey is all that its name implies, when it is so sweet, so rich, so wholesome that all who partake of it are sure to praise it, then will the affatus of its own sweet merit be all-sufficient to meet the abilities of the producer to supply the demand.

Give the retailer of honey that which he has rightly earned. Do not ask him to carry another's burden, for in climbing the heights of arts there are difficulties enough that naturally fall in one's way to make one footsore and weary. There must be a mutual benefit or the act becomes an imposition. For such proceedings are contrary to basic rules in business matters and any individual, firm or corporation who would extensively advertise the name of a probable competitor must have the assistance of a theocracy for the consummation of personal interests.

Wheelersburg, O., May, 8, 1903.

OUR
CORRESPONDENTS

Pearson, Ga., Sept. 10, 1902.

Editor Bee-Keeper:

As most of your readers know, a great deal has been said through the bee journals about having combs wired to prevent breakage. In line with the idea of securing strongly built combs, some have invented invertible combs and invertible hives, which will make the average bee-keeper swear when he tries to manipulate them. Bees will fasten combs to the bottom bar if the frames are turned upside down, but they will make a poor job of it at best —or this is my experience. Now, I am going to tell you how to get combs attached solidly to the bottom-bar, and in a manner that will leave no chance for drone comb in the corners of the frame:

Any time when there is a honey flow on and bees are building comb, will do. Remove every other frame from the hive to be operated on. Brush bees carefully into the hive, being careful not to injure the queen. Trim off the rounding bottom of the comb, with a thin-bladed knife and cut the comb lose from the frame all around, letting it rest on the bottom-bar, and wind it with a No. 10 sewing thread to hold comb in position, and replace in hive. In two to four days you can treat the other combs likewise.

Now, dear reader, this operation takes less time than it does to wire frames, and according to my idea combs so treated are much stronger than those wired. And if you don't use full sheets of foundation, you will have more or less drone comb to contend with; and you can't cut out and repair wired combs.

Yours truly,

Geo. B. Crum.

Cienfuegos, Cuba, April 20, 1903.

My Dear Mr. Hill:

The swarming season is at hand, and we are now very busy in our efforts to suppress it. The honey harvest is over for the present year; and while I obtained some four thousand gallons, the markets are so dull that the returns fail to reward the necessary labor of production. Though I secured 46 cents per gallon for the first lot of 2,500 gallons, f. o. b. at this port, I am unable to obtain more than 34 cents for the remaining 1,600 gallons yet on hand, which is unprofitable.

Fraternally yours,

Dr. J. B. Pons.

Glenwood, Wis., May 1, 1903.

Editor Bee-Keeper:

Bees wintered poorly in this locality. From what I can learn I think the loss is about 40 per cent. and weather stays cold and windy. Elms and maple are just in bloom. Clover wintered splendidly and is making a fine start. I have wondered quite often why it is that we never see your face in the journals. I, for one, would like to see your picture. Am better pleased with your journal every issue. I have seen nearly every bee journal in the world, and for fifty cents I do not know where I can get a better monthly bee journal than The Bee-Keeper.

Fraternally yours,

Leo. F. Hanegan.

THE Bee-Keeping World

AUSTRIA.

The bee-keepers of Austria are in hot water because their government has seen fit to reduce the tariff on honey and all honey-substitutes.

The Bienenvater, Vienna, is asking its subscribers and all Austrian bee-keepers to use their influence that the old rate on adulterated honey will be maintained, that on "bee-honey" the tariff will be increased and that an import tax will be levied on hives with bees when such hives weigh over 15 kg.

Oswald Muck describes his new hive in Bienenvater. It is made of wood and straw (straw-covered). He uses a deep frame composed of two halves jointed or held together by a wire-clasp. The hive is accessible only from the top. The introduction of such a hive is remarkable as the American hive feature (access from the top) is generally condemned in Germany and Austria.

SWITZERLAND.

To observe the behavior of the bees —young versus old—toward the brood and the queen, Kramer of Zurich made up a small colony of hatching Italian bees (brood combs) and the flying bees of a German colony and watched it. After two days many Italian bees had emerged. He observed the queen laying eggs in the central portion of a comb closely followed by a circle of brown bees. The yellow bees were loafing around upon the warm sealed brood and paying no attention to the unsealed brood and queen. Even on the fourth day no yellow bees seemed to take any notice of the queen as yet, but some could be seen occasionally entering empty cells, seemingly preparing them for the reception of eggs. On the fifth day yellow bees began to wait on the queen. Only brown bees were seen near the periphery of the cluster, and many yellow bees were still inactively gathered on the sealed brood. On the sixth day some yellow bees came to the outer edge and had a play spell after noon.

The queen was removed on that day. On the eighth day brown and yellow bees could be seen busily engaged constructing queen cells and apparently feeding the royal larvae. There were more brown (old) than yellow bees seen nursing the unsealed brood, and yellow bees were hovering around and at the entrance and some came in loaded for the first.

GERMANY.

From a honey leaflet sent out by P. Waetzel, Freiburg, I take the following recipes:

"Honeywater flavored with fruit juice, lemon or berry, make a good drink for fever-patients."

"Honey desolved in hot water is good for hoarseness and coughs, beneficial in diptheria, influenza and lagrippe."

"Honey and unsalted butter made into a salve is excellent in case of scalds and burns."

"Apply a plaster or poultice of honey and flour on severe burns, also on boils."

"Sleeplessness yields to internal honey treatment."

Is it advisable for the small bee-keeper to rear his own queens, is answered by Wurth in Die Biene with a decided no!

The great bee-master, Gravenhorst, is quoted as saying some years ago: We have neither found it practical nor paying, not even for the extensive bee-keeper, to enter into queen-rearing before the regular swarming season. Perhaps, adds Wurth, he was as satisfied as we are of the changing of queens unbeknown to the bee-keeper.

Roth says, in Inkerschule: "Swarming cells produce better queens than emergency or post-constructed cells, although he admits that good queens may be reared from the latter."

As to the necessity and advisability of restricting the queen at times to less breeding room there exists a diversity of opinion among the Germans as well as elsewhere. The Schleswig-Holstein Bztg. advises: By all means to use the excluder, preferably one made of pasteboard on account of cheapness. Siedloff of the Seipz. Bztg. advises against its use.

Der Traktishe Wegweiser favors the facing of hives to the north, says: The warm rays of the sun often mislead the bees in March and April to fly when they had better not do so, as many never return, on the other hand, when colonies are faced north they often show no signs of activity till the end of April, and yet they develop better than the others which are active early. Then again, colonies with entrance to the south or west suffer more from heat during the hot summer than the others. Shading the hives has become very popular for this reason.

Rundschauer (Gleaner) of the Scll-Holst. Bztg. entertains the fear that the Phacelia as a honeyplant may sink into oblivion like some other plant which enjoyed a reputation of being honeysecreting plants for a time.

A questioner says in the same paper he would like some information as to how to best arrange his hives for section honey-production. He would like to fit up hives and appliances during his leisure hours on the Sundays to come.

Goeken in Centralblatt cannot understand how it is possible that America can export honey and sell it at such low prices when the American bee-keepers have had such poor honey seasons for the past two years. He asks that some American-German bee-keeper will arise and explain.

Mrs. Lizzie Coton of "remote fame" has found a follower of late in Freudenstein, Germany. The latter does, as the former did many years ago, advocate feeding sugar syrup to bees and selling the product as pure honey, claiming that the syrup will be changed into honey by the bees. The Freudenstein idea, however, does not take well in Germany.

Valentin Wust says in Leipz. Bztg. the reason why pear blossoms are not visited by bees to any great extent is because the nectar they secrete, though plentiful, contains but little sweetness.

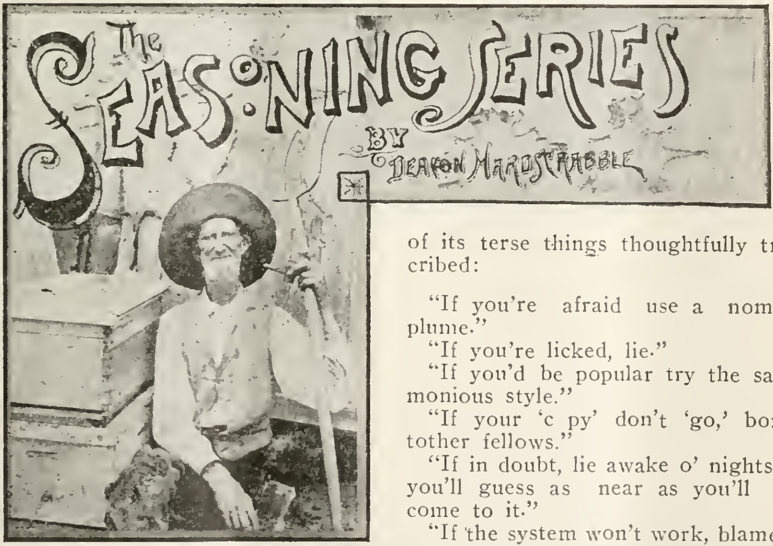
GERMAN EAST AFRICA.

East Africa is well supplied with honey bees. The natives use wooden tubes for hives, also tube-shaped hives braided from grasses, coated with clay and closed at both ends with wooden disks. But many of the honey-loving negroes are too lazy to keep bees in hives and obtain the honey by hunting bees in the woods.

ENGLAND.

The voracity of the spider is generally well known and it is therefore well to keep our hives clear of them. Sir John Lubock has figured out that if a man should eat as much in proportion to his weight as does the spider he would consume inside of 24 hours as much as two whole beeves, thirteen sheep, ten hogs and four tons of fish.

F. Greiner.



The Seasoning Series

By Deacon Hardscrabble

My Dear Bro. Hill:

On the left lies the Deep Sea of Subscribers, on the right the Devils of contributions and atwixt are the Editors and a jolly nice fix they're in, thank goodness. But for the land sakes what for do they class me along with you uns? I got a letter tother day fairly blue with brimstone flames. 'Twas good tho', jolly good. Here be some of its terse things thoughtfully transcribed:

"If you're afraid use a nom de plume."

"If you're licked, lie."

"If you'd be popular try the sanctimonious style."

"If your 'copy' don't 'go,' borrow tother fellows."

"If in doubt, lie awake o' nights and you'll guess as near as you'll ever come to it."

"If the system won't work, blame the originator."

"If the bees sting, blame the breed, not your own clumsiness." (Wonder if he meant me and my Syrians?)

"If the queens ever die, blame the breeder."

"If lost in introducing, 'blank' him."

"If you're stupid, use other folks' thoughts."

"If supers stay empty, the hive is too small—or too big."

"If the flowers don't yield, 'tis the

editor's fault for not telling you of a better spot."

"If the price is small, cuss the commission man, not your own sloppy work."

"If your life is a failure, cuss everybody but yourself—you're all right."

"The king can do no wrong" but "woe unto ye Scribes and parasites, hypocrites,
'The future'll look bright
'When yer come to expire
'But don't be too sure
'For it may be ther fire'."

Say, but he was "hot" wasn't he? Kind of banged some of us boys, didn't he? I'm glad there's somebody asides me as gits riled. But say, hold on. Away down at the end o' his letter he writes: "Say, Deacon, you need a looking glass." Hum! P'r'aps. And there be others.

Yours as ever,
John Hardscrabble.

COLORADO'S PURE HONEY LAW.

HOUSE BILL 244.

(By Mr. Murto.)

AN ACT.

To regulate the adulteration or imitation of bee products, govern labels on packages or cases containing any of such articles, and to provide penalties for the violation thereof, and repealing all acts and parts in conflict herewith.

Be it enacted by the General Assembly of the State of Colorado:

Section 1. No person, firm or corporation shall have in his, its or their possession any adulterated or imitation bee products, or substance which has been stored or made by honey bees from sugar, syrup, or any other material or substance fed to them, or shall adulterate or cause or solicit any person, firm or corporation to adulterate any bee products, or to mix or compound any substances so as to resemble bee products, or sell or offer to sell, or solicit others to sell or offer to sell, exchange or give away any adulterated or imitation bee products, or any compounds purporting to be or to imitate bee products, or sell or offer to sell, be used as a substitute for bee products unless each and every package of such adulterated or imitation bee products or compound articles is clearly, durably, and prominently either labeled or marked so as to inform the purchaser of the exact ingredients and the exact percentage of each ingredient used, or is labled or marked "Imitation Honey" or "Imitation Beeswax" as the case may be, in heavy Gothic type of not less than forty-eight points, printers' measure, in size, and the words "Honey" or "Beeswax" shall not be used upon any package of material described in this section unless the same shall be preceded by the word "Imitation"; and no person, firm or corporation shall sell such goods unless he or they themselves inform the purchaser or his representative of the exact ingredients and percentage of each; and the possession of such goods shall be held to imply knowledge of the true character and name thereof, and the intent to use them in violation of this act; Provided, That this section shall not be deemed to apply to persons having such goods in their possession for actual consumption by themselves or their families.

Section 2. The word "Honey" shall not be used as part and parcel of the trade designation of drugs, medicines, confections, or any other articles of trade or commerce, unless honey is actually employed as one of their ingredients, and to the full extent to which the use of such designation shall lead the purchaser to expect.

Section 3. Whoever shall deface, erase or remove any label or mark provided for by this act, with intent to mislead, deceive or to violate any of the provisions of this act, shall be guilty of a misdemeanor.

Section 4. No person, by himself or others, shall ship, consign, or forward by any common carrier or otherwise, public or private, any adulterated or imitation bee products, or other compounds provided for in this act, unless it or they shall be labeled or marked on each case or shipping package in plain lettering, according to the provisions of this act, and receipted for by the true name thereof; Provided, That this act shall not apply to any goods in transit between other and foreign states across the state of Colorado.

Section 5. Whenever any state office regulating the adulteration or imitation of any food products exists in this state, it shall be the duty of the executive of such office to take, in a lawful manner, samples of suspected bee products, or imitations or compounds thereof, reasonably compensating therefor from any funds in his hands belonging to his office, and cause such samples to be immediately analyzed, or otherwise satisfactorily tested, by a practical chemist, at a cost not to exceed twenty (20) dollars in any case, and if the result of such analysis shows that the provisions of this act to have been violated, to immediately make complaint before a justice of the peace of the county in which the offense was committed or such product was found, and the justice of the peace shall thereupon take full jurisdiction and hear and determine all matters connected therewith, and enter judgment accordingly, and the analysis herein mentioned shall be recorded and preserved as evidence, and the expense for making such analysis or test may be taxed as costs in case the prosecution shall be successful; the certificate of such result, sworn to by the chemist, shall be competent evidence in all prosecutions under this act; Provided, That the person accused may, by subpoena, compel the attendance in court of such chemist. In all cases where the defendant is found guilty of a violation of this act, such product shall be confiscated and may be destroyed or sold by an officer of such court, and the receipts thereof, after being applied to the costs of the case, any balance remaining shall be turned into the state treasury. If any food officer whose duty it is to inspect or bring proceedings as herein provided, shall corruptly or negligently fail to do so he shall be deemed guilty of malfeasance and shall be fined and debarred from his office, the amount of such fine going to the informer of such malfeasance; all proceedings provided and mentioned in this act, to be brought against a person, firm or corporation for violation thereof, or against any officer for malfeasance, shall be in the name of the people of the state of Colorado, and in no such case shall any advancement of costs for any bond or other security be required.

Section 6. For the purpose of this act the word "Honey" shall be held to be the nectar of flowers gathered and stored by honey bees, and it shall be held to have been adulterated when glucose, cane sugar, grape sugar or any other substance or compound has been mixed with or added to it or fed to bees; and the word "Beeswax" shall be held to be the wax rendered from combs built by honey bees, either without foundation, or upon a foundation of pure beeswax, and it shall be held to have been adulterated when paraffine, tallow, or any other wax or fat, mineral or vegetable, or any other substance or compound has been mixed with or added to it.

Section 7. No court of this state shall sustain any action brought to recover any sum due or alleged to be due by reason of the purchase of any adulterated bee products, or compounds specified in this act, unless the same shall have been labeled or marked as provided in this act, which duty of labeling or marking shall be proven as part of the case in chief.

Section 8. Any person, firm or corporation violating any of the provisions of this act shall be deemed guilty of a misdemeanor, and on conviction thereof shall be fined for the first offense not less than twenty dollars ($20), nor more than one hundred dollars ($100), and for the second and subsequent offenses not less than one hundred dollars ($100), nor more than five hundred dollars ($500), together, in all cases, with all costs of suit; and justices of the peace may have jurisdiction of all offenses arising under this act.

Section 9. All acts and parts of acts that conflict with this act are hereby repealed.

Section 10. In the opinion of the General Assembly an emergency exists, and this act shall take effect from and after its passage.

THE LITTLE BUSY BEE.

Every head of clover consists of about 60 flower tubes, each of which contains an infinitesimal quantity of sugar. Bees will often visit a hundred different heads of clover before retiring to the hive, and in order to obtain the sugar necessary for a load must therefore thrust their tongues into about 6,000 different flowers. Sometimes a bee will draw the sugar from 120,000 different flowers in the course of a single day's work.—Home Queen.

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Matters relating in any way to business should invariably be addressed to

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Falconer, N. Y.

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H. E. Hill,
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Subscribers receiving their paper in blue wrapper will know that their subscription expires with this number. We hope that you will not delay favoring us with a renewal.

A red wrapper on your paper indicates that you owe for your subscription. Please give the matter your early attention.

Editorial

An accident to our linotypes is responsible for a delay of several days in mailing this issue of The Bee-Keeper.

The National Bee Keepers' association now has away over a thousand members; and under the management of Mr. France an unprecedented record of good work promises to mark the present year.

Texas is accredited with being the greatest apicultural state in the Union; and, indeed, it is a poor year there when she fails to give birth to at least one bee journal. Failing in this, she is sure to resurrect an old one.

We have a number of large photographs from Dr. Blanton, Greenville, Miss., illustrating the recent floods along the Mississippi river, the broken levees and the work of reconstruction. The Doctor has our thanks for having thus kindly remembered us.

Pat writes from Cabans, Cuba, April 12, that his bees were doing better business in honey-gathering at that time than at any time since his arrival there, and ascribes the activity to accessible mangrove found in abundance about one mile distant, on the sea shore. He was preparing to transport his apiary of 320 colonies by schooner to an even denser field of this great honey yielder. If enthusiasm and hard work will bring success, success is assured to Pat.

After an extended period of hibernation, the Southland Queen, Beeville, Tex., has again entered the realm of active life; beginning with "Vol. 1., No. 1." The Queen is nominally a southern journal, though specifically representative of Texas apiculture, and its contents are generally decidedly practical and instructive. One of the articles in the new number, however, is not particularly meritorious. It was originally an editorial taken from our columns by the Australian Bee Bulletin and republished by the Queen and credited "exchange." We welcome the renewed visits of the Queen, and wish it abundant success.

"The Queen Bee and the Palace She Should Occupy," is the singular title of an interesting booklet recently issued by T. K. Massie, Tophet, W. Va. The author is evidently a very practical apiarist, and the motive behind the enterprise appears to be a desire to acquaint the bee-keeping public with a new hive, of which he is the inventor.

and for which broad claims of merit are put forth. While the work partakes largely of the nature of an advertisement for the new hive, Mr. Massie displays an admirable degree of independent thinking which leads us into new fields of thought along apicultural lines, and we have perused the book with much interest. It is sold at a quarter.

As we have stated before, the queen is the hub of the apicultural wheel, and it appears that at present her majesty is receiving full attention through the public press. Insofar as wholesale methods of rearing and fertilizing are concerned, the plan set forth in this issue by Mr. C. B. Bankston is quite in line with the Swarthmore system. However, the idea of casting the miniature hives to the four winds and later raking them together, is original, without a doubt, with Bankston. It is just a little strange, however, that no claim is made in this case for the superiority of queens resulting from such handling of hives. To have been in line with modern tactics, as practiced by inventors of queen-rearing devices and systems, Mr. Bankston should have observed a wonderfully beneficial effect upon the resultant queen of this aerial transit, from buggy to brush.

Our old friend and former contributor, Mr. Harry Howe, gives in a recent number of the Bee-Keepers' Review a very terse account of the objectionable features with which the Cuban bee-keeper's life is attended. Mr. Howe's extensive experience in New York enables him to draw comparisons that are of value to those with an eye on Cuba as a prospective field of operation. Mud, extreme moisture, low prices of apiarian products and high prices of supplies, unsanitary conditions, insects and short and decreasing crops of honey are some of the obstacles encountered; while robberies and murders, he infers, are commonplace affairs. However, Mr. Howe concludes with the assertion that he likes Cuba well enough to stay there; though he thinks the public has not been fully informed in regard to the dark side of Cuban life, which is, doubtless, a fact; though Mr. Rockenbach and a few others have certainly done their share towards the discouragement of Cuban immigration. The fact remains, though, that there are many others who, like Mr. Howe, like Cuba sufficiently well to make it their choice of locations for a home.

As an example of the kind of business the Colorado Bee-Keepers' Association does for its members and apiarian interests of the state, we publish elsewhere in this number the full text of a law recently enacted there, and now in full force. That the bill has been drafted by thoroughly competent and practical minds is clearly shown in the complete manner with which it covers every essential of an ideal law for the protection of the producer of pure honey. It is doubtless the most specific law bearing upon honey adulteration ever enacted. The pity is that it should not be national in its scope; but it is a beginning—an example which should be extended to the statute books of every state in the Union. The Colorado State Bee-Keepers' Association is to be congratulated upon this happy triumph of its well-directed effort, and bee-keepers of that state should appreciate their good fortune in having an association with such able minds to direct its affairs.

Jessamine, like the mountain laurel, is one of the most beautiful of flowers —the former a rich yellow, the latter a most delicate pink. Both are early spring bloomers. The fragrance of the jessamine is very pronounced, and is used quite extensively by manufacturers of perfumes. In the East Indies, it is said, jessamine bloom is strewn through the houses and temples, and thus the air is permeated with the exquisite odor. Is it any wonder, then, that the innocent bee in quest of nectar in the early spring, should be beguiled by its fragrance to sip the poison sweet secreted amid its golden petals? Man, by virtue of reason born of experience, is tempted not by poisonous, though attractive, fruits; but the instinct of the bee serves not to protect her against the deadly morsel of nectar by which she is tempted. The writer has seen the ground about the apiary strewn with writhing bees in the throes of death, as a result of gathering nectar from this beautiful and fragrant flower. We are fortunate in having absolutely no jessamine in the vicinity of our present location. Its habit seems to be in richer lands. We believe it is usually found where the magnolia grows to greatest perfection. At least, such has been our observation. The article by Mr. Harris, in this number, and the full-page picture of jessamine bloom also shown, will be of interest to our readers. For the splendid photograph, we are indebted to Mr. E. G. Harris, Daytona, Fla., one of the most progressive photographers of the state.

A REMARKABLE INCIDENT.

Mr. M. A. Gill, one of Colorado's most progressive and reliable apiarists, in the last issue of the Review, relates a most remarkable incident in regard to the introduction of an Italian queen into a three-frame nucleus of black bees. The self-introducing cage (so called) containing the new queen was inserted in the nucleus about the middle of last July. The case was neglected, and the bees built comb over the open end of the cage, in which the queen remained until the 10th of the following October, when she was found, without an escort, still alive, and was liberated; as Mr. Gill says he thought she had been caged long enough (?). However, she was immediately balled by the bees, and would have been killed, had he not administered a liberal dose of tobacco smoke, which resulted in her acceptance, and by Christmas, with stimulative feeding, she had become the mother of a good colony. This experience has given rise to the query, by Mr. Gill, whether the established theory that 45 days is the average life of the bee during the working season, is not an error, as the nucleus was still in fair condition when the queen was released. Also, does it not clearly prove that the length of time during which a queen may be confined in the cage, has nothing to do with the matter of her being accepted by the bees? Does it not show, too, that long confinement within a cage does not necessarily impair her laying power or function? The incident appears to bear out the idea held by Mr. Gill for some time that the life of certain families of bees reaches 60 days; and he offers the significent suggestion that if this be so, here is the trait that can be and should be established by careful breeding. He concludes: "Never mind the number of gold rings, nor the length of tongue, nor how bad they sting—but a queen-breeder who can assure me that his bees have an average life of 60 days can sell me a lot of queens."

In this connection, we may quote a significent paragraph from the American Bee Journal of May 14, by Mr. Doolittle: "Some seem to think that nothing has been said or written about long-lived bees and queens till of late. This is not so. Dr. Gallup does not stand alone in this matter, neither is it a new thing. This part has been emphasized during the past by one of Canada's greatest honey producers, Mr. J. B. Hall; also by Mr. Riker, Doolittle and others; but if I am right, Mr. Hall was the pioneer in calling attention to the matter. There is a great advantage in such queens and bees, especially where the latter are reared with an eye on the coming harvest."

CONFINING BEES FOR SHIPMENT.

In the preparation of an apiary for a long move, there are innumerable details which develop to keep the manager thinking and conniving. In order to avoid a loss of field bees it is necessary that they be confined after all have returned for the night. Considerable time and labor are required to affix proper entrance screens; and time, under such circumstances, is usually at a premium. As a possible helpful suggestion to those who have such work to do, we shall endeavor to explain the ingenious plan adopted by our old friend, Pat, when preparing for the Cuban trip:

Several days previous to the date upon which it was desired to make the start, Pat bestirred himself in quest of about a bushel of old corks of uniform size. Having ascertained the exact size of the stoppers at his command, he proceeded to bore a hole into which they would snugly fit, in the front end of each hive, about centrally located. Wide entrance screens were now adjusted to prevent the bees from using the ordinary entrance. These screens were supported by frames made of lath, and permitted the bees to come out and move about upon the front of the hive across its full width and upward about four inches. The bees soon became accustomed to the new opening, and through it work proceeded as formerly, though the old entrance was stopped by the screen device.

On the evening of the departure, with car upon the side-track and drays in waiting, Pat might have been seen peering into space and anxiously scanning the western horizon, while he held in his hand a commodious basket of corks. The exact moment for operation must have been very definitely decided by visible conditions, for when it arrived, a handful of corks was grabbed, and beginning at one corner of the apiary, with but a single step from hive to hive, they were inserted with mechanical regularity, and the whole 200 or more colonies were ready for loading in less time than it will take the reader to hear how he did it.

T. F. Bingham, "the smoker man," in the April Review, contributes generously to the fresh air fund—of information—relative to the wintering of bees. He is an ardent advocate of air, pure and fresh, and plenty of it in bee repositories, and says bees will not roar in the cellar if the air is as pure and fresh indoors as out. He is as emphatically opposed to moisture as he is in favor of fresh air. Though Mr. Bingham seems to assume that all Michigan bee-keepers would readily concede to his view of the matter, it is a noteworthy fact that Mr. Heddon, who is also a Michigander, takes opposing ground very strongly, in regard to both the air and moisture phases of the question. When the doctors differ so widely upon such a plain, practical question, what is left to us but to believe that they are both pursuing extreme lines, and that the golden mean is the safer ground? However, Arthur C. Miller, in the same journal, puts forth a strong plea for a copious supply of oxygen, which he would supply by means of a wide entrance, with hives protected upon the summer stands by a black, water-proof covering. Upward and lateral ventilation should be precluded. Chas. S. Blake, in Gleanings, another extensive bee-keeper, of Massachusetts, takes occasion to strengthen the plea for fresh air in the cellar, while Editor Hutchinson goes over the whole ground, citing numerous and conflcting experiences bearing upon the matter. Here is a field for scientific research that ought to satisfy even A. C. Miller or Frederick B. Simpson.

IMPORTATION OF BREEDING STOCK.

The following interesting observations are extracted from a letter to the editor by the well known breeder, E. L. Pratt, of Swarthmore, Pa.:

We have made and are still making such decided improvements in our American-bred Italian bees, not alone in color but in working qualities, prolificness, size, hardiness, gentility, etc., that many of the leading queen rearers are beginning to feel that further importation of Italian queens from their native land will be productive of no particular gain in the qualities most sought after by purchasers of queen bees.

There are specialists on this continent who now export not only to Italy but to many other foreign countries because of the excellence of the American stock. It is admitted the world around that American-bred Italians lead in brilliancy of color and beauty of markings. For raisers of such stock importation of the darker bees from Italy would be nothing short of subversion. Therefore, it were folly for him to import more.

Carniolans from their native land have a decided tinge of reddish yellow in two spots at either side of the abdomen—at least all I ever imported were thus marked—while in this country we have succeeded in breeding them true, showing naught but the brownish brands. Our advancement has been due to careful selection of queen mothers and watchful control of the drones neither of which is practiced abroad as far as I can learn.

Swarthmore.

MORE BLACK HONEY.

In The Bee-Keeper for March, Mr. C. R. Russell, of Worcester, Mass., mentioned a peculiar black honey which his bees had gathered. In reference to this item Mr. Lawrence C. Miller, Providence, R. I., writes as follows:

In my apiary, then located in Newton, Mass., I also noticed that kind of honey and some of its peculiarities. The honey was not all discolored but the clear honey had mixed in it drops and streaks of a cloudy or sooty-looking substance very much as if a bee had occasionally brought in a load of nectar different from that which the rest were gathering. From its disinclination to mix with the other honey and from its "dusty" appearance I was lead to believe it was "honey-dew" mixed with soot from the soft-coal smoke.

Where the honey contained but little of the substance no unusual flavor was noticed, but where the admixture was more liberal it had a very musty taste. It was all gathered during August and September. The bees had quite a lot of this honey for winter stores but it did not harm them.

Lawrence C. Miller.

ABUSE OF THE U. S. MAIL.

Gen. Manager France, of the National, is sending out to members a leaflet which bears the following information and good advice:

Section 496 U. S. Laws and Regulations.

(a) When not liquid or liquefiable, they must be placed in a bag, box or removable envelope or wrapping, made of paper, cloth or parchment.

(b) Such bag, box, envelope or wrapping must again be placed in a box or tube made of metal or some hard wood, with sliding clasp or screw lid.

(c.) In case of articles liable to break, the inside box, bag, envelope or wrapping must be surrounded by sawdust, cotton, or other elastic substance.

When in glass bottles or vials, such bottles or vials must be strong enough to stand the shock of handling in the mails and enclosed in a metal, wooden or papiermache block or tube not less than three-sixteenths of an inch in the thinnest part, strong enough to support the weight of mails piled in bags and resist rough handling; and there must be provided, between the bottle and said block or tube, a cushion of cotton, felt or some other absorbent, sufficient to protect the glass in handling; the block or tube to be impervious to liquids, including oils, and to be inclosed by a tight-fitting lid or cover, so adjusted as to make the block or tube water tight and to prevent the leakage of the contents in case of breakage of the glass.

Queen bees and their attendant bees, may be sent in the mails when properly put up so as not to injure the person of those handling the mail, nor soil the mail bags or their contents.

Never send comb honey by mail, and see that all other packages conform to U. S. Postal laws. I have received by mail several broken boxes of comb honey for inspection. I also find unlawful queen cages and packages with honey sent by mail.

SPECIAL NOTICE.

Beginning this month, subscriptions to The Bee-Keeper will be received and entered three full years for one dollar. This exceptional offer is made for advance payment only, but applies alike to new subscribers and renewals. The American Bee-Keeper publishes more original matter than any other monthly bee journal in America. As to the quality, the reader must be the judge. By taking advantage of this offer, copies cost the subscriber less than three cents each. Does the reader know of equal value offered elsewhere, in the apicultural periodicals? If he does, our advice would be to accept it at once.

Connecticut will have one of the most unique exhibits at the World's Fair, St. Louis. The exhibit will show the growing oyster, Large glass tanks, filled with runnig sea water, will contain living oysters of various ages. In some of the tanks will be placed the enemies of the oyster. Star fish and borers will be allowed to carry on their work of deadly attacks upon the living bivalves that the spectators may see the work of destruction. A fine collection of curios picked up while dredging for oysters will also be included in the exhibit.

Every new subscriber helps us to make The Bee-Keeper better.

HONEY AND BEESWAX MARKET.

WASHINGTON GRADING RULES.

Fancy.—All sections to be well filled, combs straight, of even thickness and firmly attached to all four sides; both wood and comb unsoiled by travel stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy white," "No. 1, dark," etc.

Kansas City, Mo., May 8.—Honey is in good demand with very light supply. We quote comb honey, 12 1-2 to 16 cents. Extracted, 6 to 7 1-2 cents. Beeswax is in good demand at 30 to 32 cents, with light supply. Old comb honey about cleared up—only a few lots of poor on market.—Hamblin & Sappington.

New York, May 7.—The demand for honey is quiet, with liberal supply. We quote comb. 10 to 14 cents. Extracted, 5 to 8 cents. Beeswax is in good demand, with limited supply.—Francis H. Leggett & Co.

Chicago, May 7.—The past winter and present spring have been a disappointment to the producers and dealers in honey, in that the consumption has been away below the average of the past decade. Choice to fancy comb is held at 10 to 16 cents per pound with off grades 2 to 5 cents less per pound. Extracted white 6 to 7 cents, ambers 6 to 6 1-2, dark 5 1-2 to 6 cents. Beeswax in good demand at 32 cents.—R. A. Burnett & Co.

Buffalo, N. Y., May 8.—Our honey market is somewhat more quiet as it is getting a little too late for it. Honey should be pretty much cleaned up by this time. We quote strictly fancy 1 pound combs at 15 to 16, choice and No. 1, 14 to 15, and other grades from 13 down to 9 cents, with somewhat of an accumulation of lower grades. Beeswax 25 to 32. Extracted honey from 6 to 8. Moderate demand.—Batterson & Co.

Cincinnati, May 9.—Little demand for comb honey at present. Fancy white sells at 15 to 16 cents in small way. We quote Amber Extracted, 5 1-2 to 6 1-2, White Clover, 8 to 9c. Sales not as lively as expected this season of year. Cuban extracted is offered on all sides, and future prices are awaited with intense interest. Beeswax strong at 30 cents.—The Fred W. Muth Co.

Cent=a=Word Column.

The rate is uniformly one cent for each word, each month; no advertisement however small will be accepted for less than twenty cents, and must be paid in advance. Count the words and remit with order accordingly.

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THE INTREPID BEE.

There lived a bee, who, though quite small
Was not a busy bee at all.
No aim in life, no cares, had he:
This bee had naught to do but be.

One day by chance he overheard
A passing stranger's passing word;
Deeply and long he pondered on it—
'Twas of a bee in some one's bonnet.

"A bonnet!!" thought the bumptious bee;
"That would be just the place for me!
"What residence is so correct
"For one exclusive and select?"

Now it fell out that very day
Miss Amorilla came that way:
Wearing (as you no doubt foresee)
A rose decked bonnet. Then the bee

Exclaimed: "Hurrah! My luck is great
"How all things come to those who wait!"
And with a sudden cry, "Here goes!"
He plunged into the reddest rose!

Its honey he essayed to suck,
But found instead that he was stuck;
And from a snarl of cotton-wool
In vain his legs he tried pull.

Within his mouth was such a taste—
Aniline dye and glue and paste—
While wires and stiffened muslin things
Scratched his poor eyes and tore his wings.

But though in dire and luckless flight,
He kicked and pushed with all his might,
And somehow managed to get free,
A sadder and a wiser bee.

A moral, pointed like the bee's own sting
Adorns the tale, and should a lesson bring;
A little learning is a dangerous thing.
—Caroline Wells, in The House Beautiful.

A copy of Mr. Alley's new pamphlet, "Improved Queen Rearing," comes to hand this month too late for review. A glance through its 60 pages yields a promise of something interesting, when we have time to read more carefully.

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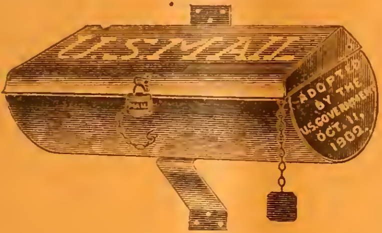
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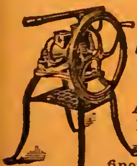

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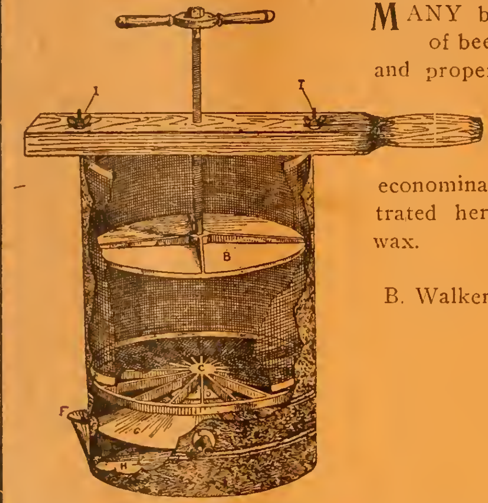

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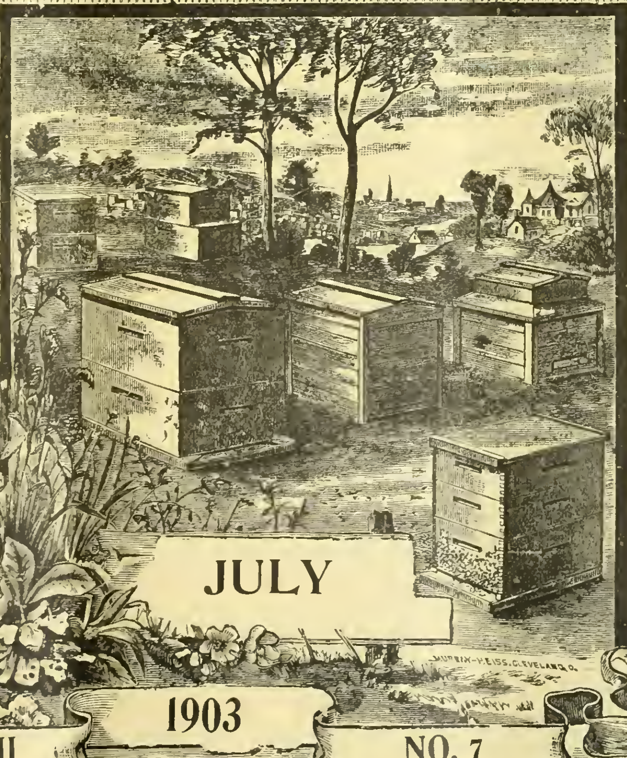
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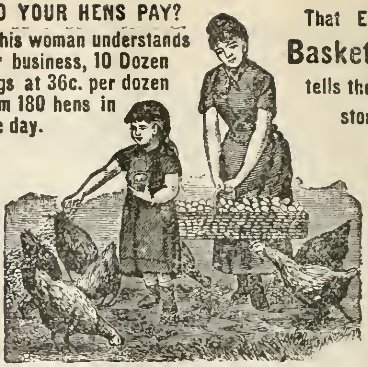
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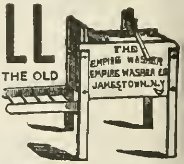

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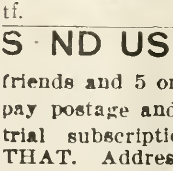

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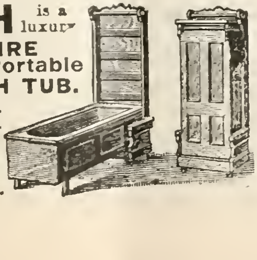

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THE AMERICAN BEE-KEEPER

Published Monthly by The W. T. Falconer Mfg. Co.

Vol. XIII JULY, 1903 No. 7

FROM MISSISSIPPI.

Several Subjects Discussed by One of the Veterans.

(Dr. O. M. Blanton.)

ADVANTAGES OF THE ONE-STORY HIVE.

IN WORKING two-story hives for extracted honey there is a complete evolution of combs from the lower to the upper story every year. The tendency of the bees is to ascend to the upper story to deposit honey and the queen follows to deposit her eggs where the food for the young is most abundant. The result is the honey deposited in the lower story is consumed or carried to the upper and in the close of the season the lower combs are, to a great extent, empty, requiring the combs of honey and brood in upper story to be removed to lower and vice versa. This process entails a great amount of work.

To place the brood with what honey is necessary in the lower story and remove all together to the upper story combs at close of season is impracticable in our country, where we have to store them secure from the moths.

To construct a house and fumigate the combs would be too expensive in a large apiary. With a one-story hive the above trouble would be obviated, and the bees could protect all the combs from moths. With sheet or board cover the combs could be easily exposed and the combs of surplus honey removed with ease and rapidity and the condition of combs inspected and regulated easily; a great desideratum.

I prefer all one-story hives, with from 18 to 20 Langstroth frames with division board and to add the frames as required.

THE DOCTOR'S START

In 1874 I captured a large swarm in a common box; purchased soon after ten Langstroth hives and increased to that number.

Finding the yield of honey so great I visited my friend, Chas. F. Muth, of Cincinnati, and gained from him a great amount of apicultural knowledge. I increased from time to time to four hundred colonies, but from various causes am now only in possession of one hundred and ninety-five, but hope yet to reach my previous number.

My largest yield was fourteen gallons to the hive, spring count, owing to an exceptional season. Such cannot be realized now as the forest is almost entirely destroyed near me. I have averaged in all seasons about five gallons per colony, spring count.

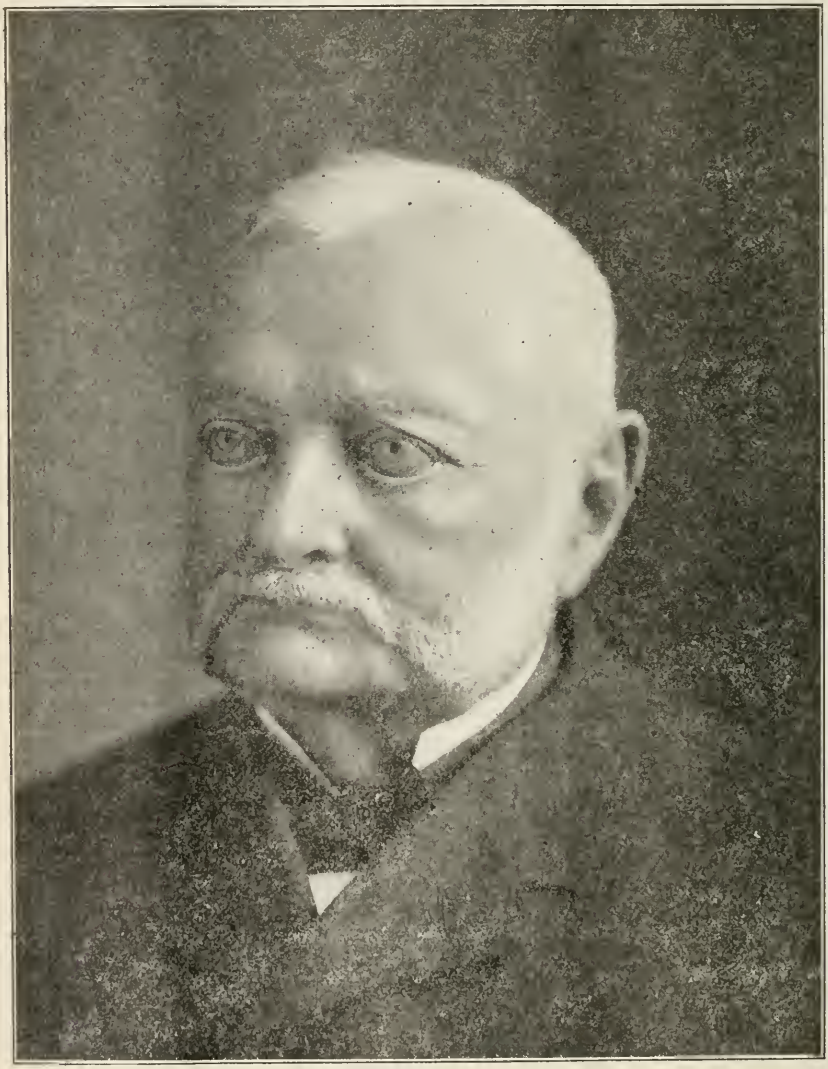
CONTENDING AGAINST THE NATURE OF THE BEE

Many of the new inventions and modes of management of an apiary are in direct opposition to the nature of the bee. Queen excluders give a disposition to the bees to swarm instead of working in the upper story for surplus honey.

In regard to the drone trap it prevents their services as designed in the organization of the colony. Much is yet to be learned in regard to the duties of the drone. Many years ago I selected two strong colonies and decapitated the heads of all brood from time to time. In course of the season they became queenless and I believe this was caused from want of services of the drones. I now only curtail the quantity of drones.

I never now clip queens' wings as I am satisfied it results in their being lost on the ground if not present at the swarming or being superceded by the bees.

In very hot weather bees cannot work in close hives with only the entrance for ventilation. They will hang on outside of hive and idle, instead of gathering honey. In such cases I turn back the corners of the sheets and with fresh air they soon get to work. As a proof of the need of ventilation, how often do the bees cut holes in the



DR. O. M. BLANTON.

sheet evidently to obtain fresh air.

Bee escapes are useful to apiarists who have a few hives and work only for home needs and pleasure. They occupy too much time and labor in a large apiary.

Small hives are another drawback, as they fail to give capacity for the brood and honey and the bees swarm from over-crowding. Give bees room with no obstructing traps and remove the surplus honey wherever there is no brood.

Simplicity and ease of manipulation of hives and due regard to the nature of the insect is of vital importance to the apiarist working for profit.

BRUSHED SWARMS.

So much has been written in regard to brushed swarms, I determined to try the process without combs and use frames with starters or full sheets of wired foundation, and add a Doolittle feeder with three pounds of extracted honey.

I place an empty hive in rear of a strong colony, removing the combs one by one, and brushing all the bees from them back into the old hive, and place the combs in the empty hive. Then remove the hives with brushed bees and feeder to another stand, and place the hive with combs of honey and brood in place of the old hive just removed. The returning bees with capped brood soon hatch out another queen and the feeding of extracted honey enables the bees to build up combs rapidly and prevents a disposition to abscond. It would be a great advantage to introduce a young queen if you have one, but I am experimenting without. I have tried the plan on quite a number, and so far have succeeded, and no absconding has occurred.

Although in its experimental stage, to test the non-use of a brood comb, I would prefer using in addition a comb of brood with eggs and larvae to insure a queen being hatched, in the event of the loss of the old one.

I shall continue the experiments during the season so as to decide its utility.

Greenville, Miss., April 27, 1903.

Don't be afraid to ask for sample copies for your friends.

THE REARING OF THE QUEEN BEE.

(W. W. McNeal.)

SUCCESS with bees depends so much on the queen that I feel constrained to again caution the amateur to be careful when they take hold of this branch of apiculture.

The thrift of the apiarist may be commendable and the crystal tide of nectar may flow on in its silent way, but neither of these can atone for any departure from the standard of perfection Nature has laid down for the queen. She must be a queen-bee in all that the term implies, in her temperament and her capabilities, or she may block the way in the pursuit of honey-raising.

In a state of Nature bees lavish their attentions upon a queen larva from the very dawn of its existence. The mystic current of life that quickens and transforms is never broken by intermission, but the favored one sips at the royal fount from its earliest youth. This gives it greater stability and a longer lease of life. In proof of which I have only to call attention to the behavior of queens reared to supersede the old one.

There never was and never will be better queens than these. I don't mean that all queens reared at such times are perfect, but the best of them are better than the best of those reared by any other method. This is significant, and bee-keepers will do well to ponder over it. Queens reared from larvae that are 36 to 48 hours old may have the outward semblance of a perfect queen, but the grosser sensibilities of commoner bees are a part of their inheritance.

The grafting method of queen rearing has probably wrought as much harm as it has good to honey producers. This is not saying it is not capable of much good, but it is attended with the danger of using larvae that are too old even according to the ideas of the devotees of the grafting method. The older the larvae used, the more pronounced are the wayward tendencies of the mature bee. For just as a queen is reared along the lines of a worker-bee will she prove herself susceptible to those influences which excite the workers to acts which culminate in swarming. I would not be understood as claiming that a return to primitive methods or to conditions governing in cases of a supersedure will make a queen immune to the swarming "fever," but it is the nearest approach to that goal of the bee-keeper's ambition. Being polished fully in accordance with the laws governing her development, the queen is an anchor to the colony when internal conditions are grievous and the natural honey resources are favorable to swarming.

When artificial cell-cups with supplied royal jelly and larvae are given to a colony of bees they at once begin to lick up the jelly just as they are wont to do when a frame of honey is placed in their midst. By the time their excitement has subsided the cups have been cleared of about all trace of food. The larvae, mind you, is still receiving the mark of a starvation stunt and makes no advancement during the interval as a queen, but as a worker. The nurse bees having regained their composure supply the needs of the larvae, but it has then lost irretrievably in the more distinguishing features of a perfect queen. That tiny speck of insect life by Nature candled for the perfecting of the highest form of insect life in the colony is thus robbed of the graces that come of early training. What a forlorn hope! the hope that such queens are the peer of those reared uninterruptedly from the egg!

The true form of grafting larvae consists in transferring them to cell-cups already accepted by the bees. By carefully removing the first larvae used so not to disturb the food the cell contains, the second larvae can be substituted with the least possible amount of interference with its growth, but this entails just double the amount of work; hence the method is often abused with the results before stated.

The hand of art may lend enchantment from a commercial point of view, but Nature is not beguiled by any artificial effects that are not in strict harmony with her original designs. Being guided by instinct it is not supposable that the bees err in their treatment of a queen larva, when left to their own sweet will, any more than they fail to follow original designs for the construction of the honey-comb. Art may exceed Nature in the displacement of the queen-cells and of the combs for extensive operations, but can never improve on her ways of developing life in the larval bee. This is one of the "mysteries of the bee-hive" that the inventive genius of bee sages may not exploit before a credulous public.

The qualifications of a perfect queen include first of all a serene temperament. Nothing depreciates her real value more than a lack of this. Prolificness, though a very desirable physical mark, availeth but little if the ruling passion is a mania for swarming. The character or quality of the food and its early application has a counteracting influence on the temperament of the queen-to-be. By observing this fact and then making selections from those colonies that show the most staid traits of character, swarming may cease to be a troublesome factor. The quality of the food cannot be better to this end than when a colony is superseding its old mother queen. The colony being otherwise in a normal condition and both honey and pollen being plentiful, the nurse bees are in a state of composure that enables them to furnish nourishment to the young larval queens that cannot be excelled. They are not intoxicated with a desire to swarm, and the nature of the food they prepare is such that it will leave a pleasing impress on the character of the queen.

The prodigal tendencies of a queen being suppressed,in a positive measure simply by a perfect development, it certainly would seem to be worth the while for honey producers to use those means that will insure the best treatment of a queen while she is maturing. We do not entertain the hope of entirely eradicating by perfect development and selection in breeding the tendency to swarm. There are other causes that must be considered. Bees cannot be bred to stupidly endure conditions which seriously interfere with the economy of the hive. The annoyances of a crowded brood chamber and the sun's fierce rays may burst the bubble of one's hopes as to having bred out the swarming tendency. But remember the true worth of early training and in your efforts to direct the bees don't stand in the way of your own achievements by repudiating the fundamental principles of queen rearing.

Wheelersburg, Ohio, June 13, 1903.

THE BEST BEE HIVE.

(Rev. C. M. Herring.)

ARTHUR C. MILLER'S article in the June number of the American Bee-Keeper, on "Hive Construction," attracted my attention.

His theory in favor of the shallow hive, founded on his personal observation and critical study, is the most convincing argument I have ever read on this subject. But from my experience of thirty years in this business, I have reached somewhat different conclusions. During this time of handling and studying bees I have tried about every form of hive that has gained public attention; and from the Kidder, Langstroth and Quinby hives down to the Heddon, Simplicity and Sweet Home,I think I have given them a fair trial; and I have long since concluded that I did not want, for my use, the long, shallow frame of the Langstroth, nor the deep hive of Kidder, but would choose a modification of both, and thus strike the "golden mean," with a leaning towards the Kidder.

Early in my experience I bought a hive and had dealings with one Carey, of Colerain, Mass.—an old veteran in the business— who, at one time, was a work-fellow in the same shop with Langstroth, and who at first shared his views in shaping the bee-hive; but in after years, of increasing wisdom, he changed his mind, and made his hives with a shorter and deeper frame —which he called the "Langstroth Improved." In this hive the cavity for frames was 14 inches long and 10 inches deep; and such is nearly the capacity of the Sweet-Home, from which I get my best returns.

If it is true that bees, on the long narrow frame, cluster between the entrance and their stores, making it easier and safer, without breaking the cluster, to move on their stores, than in other directions, then, there is force in the argument, and our friend Miller has made a strong point. But this theory may be a question of some doubt. In my case I rely more on experience than on theory. The greatest results I ever secured, were from a hive having a base that measured 14 inches long, 13 inches deep and 12 inches wide. And my next greatest success was from a hive of about the same dimensions. In my observation hive, which opens on three sides, and carries a frame 13 inches long and 11 inches deep, I have noticed that the honey stored for winter is found on both sides and in the rear.

And on the approach of cold weather I find the bees clustered, close up under the blankets which are lifted one-half inch above the frames.

The honey is on three sides of them sure, and when the hive is properly protected with tarred paper, (as recommended by Miller) or old carpets, blankets, and such like, closely packing the hive, and then over all a cap three feet square to keep the colony dry in summer and winter; with such treatment and such conditions I have always found complete success in wintering bees out of doors. Under these conditions I think the bees, in winter, can move on their stores as easily and safely as when the frame is 17 inches long, for their food is nearer at hand.

Brunswick, Me., June 11, 1903.

KINKS AND KINKLETS.

(Arthur C. Miller.)

SHEARS FOR CLIPPING QUEENS

TO CLIP or not to clip, that's the question, and it all depends upon the clippers. Long years ago I clipped all queen's wings, then owing to maiming some queens and from other notions, I abandoned it, only to resume after a few seasons. Clipped queens are certainly an advantage, but the work at best used to be a bothersome job, almost enough to overcome the advantages. I tried long shears and short; pointed blades and blunt; big knives and little, but until recently I never approached the work with a feeling of joy.

Some time ago I ran across a peculiar pair of scissors that looked promising. The price seemed a trifle high, but as a venture I bought them, and now could I not get another pair I would not part with them for twenty times their cost. Clipping with them is a real pleasure, and one is half inclined to try fancy trimming of the workers' wings just for the fun of it. The handles three inches, blades one inch long but their virtue lies in the shape of their blades which are exceedingly slender with finely rounded points and all parts but the cutting edges are round and polished. They slip under the queen's wings almost of their own volition. There is no danger of impaling the queen on any sharp points, or of denting her abdomen with the sharp side of a wide blade. It is not even necessary to pick the queen from the combs, but just hold her still by pressing her thorax against the comb with one finger, and then snip the desired wing or wings.

Good tools pay and he who works with poor tools is more than twice tired.

RELATING TO SMOKERS.

One of the tools of absolute necessity is a good smoker, and from the sundry things which pass for such, I begin to believe that the really good smoker is a rare bird. Everybody seems to want a "low priced" article, but it is the worst kind of economy. Unfortunately, however, a high price does not always prove a guarantee of quality. The first essential of a good smoker is the "blow;" if the bellows are not ample,the air supply is limited, be the draft ever so free. But big bellows must be supplemented with free draft into the fire box, a condition found in precious few smokers. Add to good bellows with clear draft, a fire box which will take "any old fuel" and you have a smoker that will "smoke." Many of the widely advertised "strong blast" smokers would not supply the nimble flea with half a breath. They are fine for what they are made for—to sell—but avoid them for use with bees.

The best smoker that I know of is the largest sized Bingham; its faults lie in too light stock and careless putting together. Inspection before shipping should have prevented poorly made ones from getting out. Heavier stock would not add materially to the cost, but would add decidedly to its serviceableness.

But there are a number of little kinks which go to make the use of any smoker more satisfactory, and the handling of bees more pleasant. The first of these is starting the fire. Saltpetered rags will do it; kerosene will do it; pine shavings will do it, but a handful of charcoal (half-burnt twigs and chips from a bonfire) is by all odds the best thing to put in on top of the rags or shavings. A few puffs will kindle the coal, and then punk, chips, hard wood or most anything that can burn will ignite and stay burning. A maxim which every beekeeper should paste in the front of his bee veil is: Never open a hive without a well-fired smoker right at hand. You may never need it, or life may depend on it. A really good, ever-ready smoker is cheap at several times present prices. Never take the lit smoker indoors unless you stay there with it. When through using it dump the fire and put it out, and if the smoker is hot, set it on something which cannot burn. Leave the top off and then you won't have to bang it to pieces to open it when you want to fire up again. A particularly convenient appliance is a tobacco burner to use in conjunction with the smoker for introducing queens, etc. Ordinarily a handful more or less of tobacco thrown into the smoker is used, but 'tis a wasteful way and burns out quickly. True, tobacco stems are cheap, but not available to many, and the "cut-plug" tobacco is more convenient and gives a fine pungent smoke which I like.

THE ROBBER CLOTH

The robber cloth devised by Dr. Miller is almost as essential as a smoker, and often saves using it and prevents many a lot of roiled and angry bees For the uninitiated I would describe it as a square of cloth about eight inches larger each way than the hive, and having sticks nailed to two opposite edges. Keep them handy and throw one of them over the open hive when you have to leave it for a few moments or when you want more time to examine some comb.

BEE GLOVES.

Many a veteran looks with scorn on all who use gloves while working about the bees. To those among us who have become immune to the bee poison, stings have few terrors, but to the novice and the timorous amateur it is different, but even the veterans may sometimes find gloves a decided help and comfort. Two occasions when they are appreciated by the initiated are when work is necessary on some roiled or vicious colony, and when some emergency calls for work just as we are ready to go somewhere and the daubing of the hands with propolis means annoying delay. But there are gloves and gloves. Rubber ones are expensive, short lived, hot and clumsy. Cotton ones invite too many stings, and most leather ones are little better. There are leather gloves, however, that are superior to all others; that are soft and flexible; that on account of their treatment or finish do not invite stings, and which may be wiped clean of honey with a damp cloth and propolis may be scraped from them with a dull knife, and the glove wiped clean with a little gasoline or naptha.

To those who habitually use gloves and yet find them inconvenient when picking up queens and similar work, I would suggest cutting off a half-inch of the fore-finger and thumb of each glove, staying the seam from raveling by a few stitches.

Whether you keep one colony or one hundred, have the best tools you can get, and don't be afraid to pay a good round price for them. Good ones are cheap at most any price.

Providence, R. I., May 23, 1903.

HOW TO SAVE WAX.

(Bessie L. Putnam.)

THE OLD bee-keeper fully realized the value of wax and the importance both of saving the finished product and supplying all available substitutes. Experiments show that to make a single pound of wax requires the consumption of twenty pounds of honey. Hence, besides inducing regular work in comb-building, the advantage of using foundation is too great from a financial point of view to be omitted.

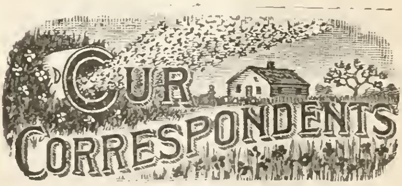
Where many bees are kept the wax is cared for in the most approved manner, and every piece carefully husbanded. Not always so when the amateur has charge of a few colonies. Yet, if he but knew, every piece past usefulness in its original capacity may be converted into cash or its equivalent. If discolored and unfit for market, there are many little household uses for it. Save it all.

A simple way of reducing it is to pack into cloth sacks, (the loose cloth in which salt or sugar is put up will be just the thing). Put them in a boiler of water and heat slowly. When all is melted put weights on the bags and let the contents of the boiler cool. The wax, which as soon as melted will have risen to the surface, will cool and harden and may be removed in a thick cake. If there are still impurities in it, repeat the process. By pressing the bags while still boiling one may press out more wax, but with it will be considerable refuse matter.

The general sentiment seems to be that there is no way of removing wax but by heating, and that it is cheaper to burn the cloths used in straining than to clean them. By soaking in a little kerosene for a few hours and then cleaning with hot suds one may get them into shape without very much trouble. The kerosene softens the wax so that it readily yields to the soap and water. This plan will also prove of great help in cleaning the other utensils used in melting the wax. Let them cool and scrape off the wax easily detached in that way, and the remnants, which by old methods prove the worst to remove, will give little trouble.

A ball of beeswax will be a most acceptable gift to the seamstress, to keep her thread from knotting. A small piece tied in a cloth to rub over the flatiron will keep it smooth. Now that carpets are being replaced by waxed floors, its use in the household will be greatly extended. Even the small piece of wax is worth looking after.

Conneaut Lake, Pa., May 25, 1903.



Whittier, Cal., May 2, 1903.

Dear Mr. Hill:

You may be surprised to get word from me from Southern California instead of South Dakota. I left Dakota in March and spent a week in Iowa and found many bees among farmers dead. I don't believe that more than one in ten is alive this spring, and before I left I visited Mr. E. Kretchmer of Red Oak, and I can well remember my first visit at his place when I was a small boy. He was running a small saw by horse power at Coburg, Iowa. He opened several hives in which were queens from Italy and I purchased my first Italian queen from him and took her home, 75 miles in a buggy and I still own some of her direct line decendants. They are still gentle hustlers, although it has been over 30 years.

The rains that brought up every seed of white clover kept the bees from getting fall honey so the bees are gone with the promise of a wonderful crop of white clover.

A very few fed their bees and such are ready to reap a great harvest.

About the middle of March I left Iowa and made no more stops until I reached Utah.

I found bees in the narrow valleys where alfalfa was grown. One day our train ran off a switch and delayed us several hours at Price, Utah, and as it was a mild day I found some bee-keepers.

They claimed that their greatest trouble was that the bees would not swarm, only three swarms from 50 colonies in three years. They got almost all extracted honey. One woman said she got hardly any crop last season. She only sold 64 cans (60 pounds) of honey last season from 50 colonies. I asked her how much she considered a crop, and she said "three or four cans per colony." I guess this is enough for the present, and later I will tell what I saw in Idaho, Washington, Oregon, Central California and here in Southern California.

Fraternally yours,

Thos. Chantry.

THE Bee-Keeping World

AUSTRIA.

The opening of International Apiarian Exhibition, held in Vienna, occurred April 4, 1903.

From an address delivered on this occasion by Dr. Paul Beck, the following may be of interest to American readers: "The bee-keepers in Austria number about 160,000, and keep in round numbers 1,000,000 colonies of bees. They produce 6,000,000 pounds of honey and 400,000 pounds of wax. The service the honey bee renders the floral world is of greater importance than the honey and wax they produce.

An advertisement in Neue Freie Presse contains this: The monopoly of how to make and to sell sugar-honey, equal to hive-honey in taste, aroma and color, for sale cheap by, etc.

GERMANY.

Schleswig Holst-Bztg advises to establish a drinking fountain for the bees. A shallow dish is to be placed in a sunny corner filled with moss then filled with water. It also says, that besmearing the brood frames with vaseline or paraffin will prevent the bees glueing them together with propolis.

Straw is still used extensively in the construction of hives by the bee-keepers of Germany.

W. Fitzky, in Centralblatt, holds that the equalizing of colonies in spring is a good thing, and says the bee-keepers in the Heath have it down so fine that their bees cast all prime swarms within a week. Confusion arising from the mixing up of prime and after swarms is thus avoided.

The customary price for good comb-honey ranges between 1.20 to 1.30 marks at present prices in Germany, equal to about 30 cents.

Uniting of different colonies is done best by bringing the two or more colonies to be united together in a new hive. This will prevent all fighting. Queenless colonies may thus be united with queen-right colonies without any trouble, says Fitzky in Centralblatt.

The German government is looking into the matter of bee-keeping and adulteration of honey at the present time. A government experiment station with ten colonies of bees has been established near Berlin, and a bulletin has been issued of late treating principally upon the adulteration of honeys; it also tells of the number of colonies kept in Germany, etc. It appears there were kept in 1900, 2,605,350 colonies. Of these 1,151,771 were in frame hives and yielded 16,171,200 pounds of honey; the others—box hives, straw skeps, etc.,—gave a yield of 13,729,000 pounds. The frame hives yielded three pounds to two of the others.

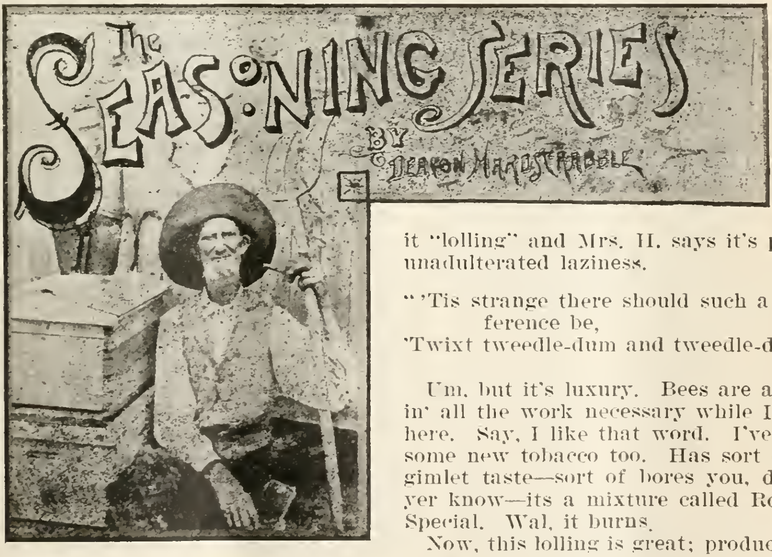
A singular case of robbing is reported in the Leipz Bztg. A certain bee-keeper had sold a young swarm of Carniolan blood to a neighbor. The latter was delighted to see his new purchase do so nicely, filling the combs with honey; but an investigation revealed the fact that the young swarm was carrying the stores from the mother hive to his own. The matter was satisfactorily settled between the two owners of the colonies.

ITALY.

The Quinby or McEvoy treatment of foul-brood colonies has been practiced in Italy very successfully for years.—Raushenfels (in Imkerschule.)

A bee-keeper of Italy migrated with his 300 colonies across the Mediteranean Sea to Tunis, but failed to make a success of bee-keeping and producing honey. He succeeded, however, in selling out to the French Bee-Keepers Association there and came home a richer man.

F. Greiner.



Dear Bro. Hill:

Did you ever "loll?" Well, sir, that's what I'm a doing now, and have been doing for a month past. Mary calls it "lolling" and Mrs. H. says it's pure unadulterated laziness.

"'Tis strange there should such a difference be,
'Twixt tweedle-dum and tweedle-dee."

Um, but it's luxury. Bees are a doin' all the work necessary while I loll here. Say, I like that word. I've got some new tobacco too. Has sort of a gimlet taste—sort of bores you, don't yer know—its a mixture called Root's Special. Wal, it burns.

Now, this lolling is great; productive of great discoveries, too. While a lolling and a reading and a smoking, I've a 'twixt times been a thinkin'—accident—well, here be some o' the thinks, mine and other folks':

Gay says:

"The daily labors of the bee
Awake my soul to industry."

Note 'twas only his soul. He knew how to loll.

"Wouldst thou achieve greatness O man? Then hustle." Not much, just loll and "crib."

You needn't stay mad 'cause folks keep on borrowin' your copy and palmin' it off as their own. It's heaps easier nor originatin'. Is it the glory you want? Borrow a tin halo. Revenge?

"Revenge we find,
The abject pleasure of an abject mind."

Is it facts you want? They're a nuisance and interfere with fiction.

What sort of kind of honey do you s'pose Shakespeare got against when he wrote:

"They surfeited with honey; and began
To loathe the taste of sweetness whereof little
More than a little is by much too much."

'Twant Mangrove.

That makes me thirsty; but Popp's "lemonade" fills the bill.

"A small glass, and thirsty! be sure never ask it;
Man might as well serve up his soup in a basket."

Two more Root men on the directorate of the Natl. Whose Association is it, anyway?

Bro. York has put all the headings of the A. B. J. in mourning. What sin is he mourning for now, b'gosh?

Look a here, youngster, drop that "humble servant" business quick! Nobody can execute humility with such neatness and dispatch as the Humble servant. Rememberest thou not the malodorous Mr. Uriah Heap who was always "so humble." Like him, they're all bear watchin'.

Well, them bees has got to have some more supers today, so I'll have to stop lolling for awhile.

Remember Uriah.

Yours as ever,
John Hardscrabble.

BULK COMB HONEY.

(H. H. Hyde.)

A few years ago bulk comb was practically unknown, but today there is scarcely a bee-keeper in the United States that has not heard of it and how it is produced. It is now the principal product of the southwestern Texas bee-keepers. Its production is rapidly gaining ground not only all over Texas, but is gaining a footing in Nebraska, Colorado and Utah.

The demand from the consumers for this article is rapidly growing and is keeping far ahead of its production, and of this fact the bee-keepers are rapidly catching on. There are many reasons why it is gaining a hold with both the consumer and the producer and especially the former.

When he buys a can of bulk comb honey he feels sure that he is getting a pure sweet just as the bees made it; he feels that he is getting full weight, and he knows that he has bought it at a less price per pound than he could have bought section honey. Then he has his honey in a nice bucket where the honey cannot break or lose out when cut in two, and when he has eaten out the honey he has a useful pail left. These are some of the reasons why the consumer prefers bulk honey comb to section honey. I am talking of the majority of the people. Of course there are the wealthy who will always buy a limited quantity of section honey because it is high in price, and has to them a fancy look.

Bulk comb is produced in either full bodies or shallow Ideal supers. If the former is used it is hardly practical to fasten in full sheets of foundation, as the frames cannot be wired because we expect to cut the honey out, but with the Ideal frames we can use full sheets if we so prefer. Ideal supers and frames are prefered generally because they are not so large, are not so heavey to handle, they are nearer the right amount of room to give a colony at one time, and they can be freed of bees much quicker than can full bodies. To free them of bees we simply smoke down between the frames well and then pry the super loose and jounce it, when it will be found that most of the bees will fall out. They can then be stacked up and a hole left at the top, when in two or three hours' time the last bee will have left the supers.

Then again the supers and frames are nice for extracted honey should the bee-keeper in any event desire to so use them, and, in fact, in putting up bulk comb it requires about one-third extracted honey with which to put the comb up.

In packing bulk comb we cut out the comb nicely and place it in the cans, and afterward pour in extracted honey to cover the comb and fill up the crevices, and in this way about one-third extracted honey goes in, and it must be remembered that this extracted honey goes in at the comb honey price. It has been found both practical and profitable to produce both comb and extracted honey in the same apiary and in fact on the same hives at the same time, for many have found that it pays them to have one super of combs on top of the regular brood nest so that the queen may fill it with brood before the honey flow, if she likes, and when the flow comes these supers catch the first nectar, and as soon as the flow is on and the bees have commenced to secrete wax this super of combs is lifted and the empty frames of foundation placed between them and the brood, which is the most effectual way of baiting bees into the supers, and it will be found that where colonies are so worked swarming is kept in check if not entirely prevented, the queen is left in entire possession of the regular brood nest and by the time the flow is over the brood will have hatched from the shallow super of combs and the bees will have filled it with extracted honey, and this is just what we will want in putting up our comb honey, as we have already shown that at least one-third the honey must be extracted with which to pack the comb. It has been demonstrated time and again that bees will store all the way from 50 per cent. to 100 per cent. more honey when worken for bulk comb than they will when worked for section honey, and many believe, the writer included, that where the bees are worked as outlined above that nearly if not quite as much bulk comb honey can be produced as could be produced of extracted honey alone. and especially does this hold good where the localities have fast flows of honey, in which a great amount of wax is always secreted whether there are any combs to build or not.

We will now show the relative cost of bulk honey to section honey. When we buy bulk comb supers and frames we have bought them to use for years. When we buy sections they are only for one season's use, whether they be be filled with honey or not. Then we have to have costly separators, followers, etc., that soon give out to be replaced. When we go to ship we have to have costly glass front shipping cases and these cases in turn packed in crates for shipment. When we pack section honey we have to take lots of time and patience to scrape the sections. When we pack bulk comb honey we buy cases of cans and cut the honey out into them.

When we get ready to ship we have to pay a high rate of freight on section honey, and more, run the risk of having a good part of it badly damaged or destroyed altogether. When we ship bulk comb we get a low extracted honey rate and have the assurance that it will go through as safely as if it was extracted honey. When we go to prepare supers for the harvest, all we have to do to our bulk comb supers is to scrape the top bars a little and fasten in the foundation, but with section honey we have to make up shipping cases and sections and spend a long time putting the foundation in just right. When the supers are put on, the bees go to work in the bulk comb supers at once and in a big cluster and thereby forgetting to swarm, but with section supers the bees have to be carefully baited and coaxed into the supers and when they get there they are cut off into twenty-four or more small compartments, which they have to try to keep warm, and to get them sealed out to the woods we have to crowd the bees and thereby losing honey. By crowding we lose equally as much honey as we do when the supers are first put on by reason of the bees being slow to enter the sections. Just how much honey is lost by the bees being slow to enter the sections, how much is lost by crowding and how much is lost by swarming I am unable to say, but it is considerable.

You may take the items in the production of the two honeys from beginning to end and there is not an item that is not in favor of bulk comb honey, except solely in the matter of price received, but friends, where unbiased men have tried the production of the two honeys side by side and carefully taken into consideration every factor they have invariably found that they can make at least 50 per cent. more money producing bulk comb, and many have placed the per cent. much higher.

There is another fact, not one of the men who once quit section honey have gone back to it. We were ourselves large section honey producers several years ago, but have been converted and have disposed of most of our section honey supers and today have a large pile of them awaiting a purchaser.

You may say, I have no trade or demand for bulk comb honey. I will say that all you have to do is to produce it and offer it for sale and you will soon have a trade that nothing but bulk comb will satisfy. You may say, I will have to ship my honey and what then?—there is no market for this new product? I will say, take your honey to the cities and offer it yourself and you will find a ready and appreciative market and one that will next year demand more bulk comb and the grocerymen will have to order their supplies from you. There is no question but that a market can be found. The bee men of Texas have found a market for more than they can produce, and I take it that the bee men of other states have the same intelligence and the same get-up-and-get that the Texas bee men have.

The packages used in putting up this article are now most largely three, six and twelve pound tin friction top pails, that are put up in crates holding ten of the twelve pound cans, ten of the six pound cans and twenty of the three pound cans. There is also some demand for bulk comb in sixty pound cans, two in a case, the cans having "8" screw tops. These are sometimes ordered where the buyer desires to put the honey into glass packages for a fancy trade.

In conclusion I wish to refute the statements made that the production of bulk comb honey was the old fogy way of honey production. I assure you that it is not and that it requires as much skill and as fine a grade of honey as it does for section honey. I also assure you that the consumers are behind this move and that it is only a question of time when the production of section honey will almost have disappeared.

Should there be any who read this that desire further information I should be glad to give it.—From The Progressive Bee-Keeper.

THE ROMANTIC CAREER OF LORD STRATHCONA.

The life of the Scotch boy, Donald Smith—now Baron Strathcona and Mount Royal—would read more like romance if it were not so studded with improbabilities. People like their romances to be possible: it is only from reality that will be endured the touches of extravagance which turn standard fiction into fairy tales.

Young Donald Smith, dreaming in his Scotch village the stirring adventures of a fur-trading uncle in the wilds of North America, and afterward becoming fur-trader himself, first as clerk of the Hudson Bay Company in the bleakest corner of its vast territory, "pitiless Labrador;" then climbing, after years of hardship and fidelity, to be a chief factor of the Company and resident Governor in America, and finally, in his old age, governor of the home company in London, High Commissioner for Canada, and a peer of the realm—that is romance.—From the series "Captains of Industry," in the June Cosmopolitan.

The following paragraph is from a series of articles now running in the Irish Bee Journal, written by Dr. A. W. Smyth: "Temperature is everything to the bees, and in cold climates they have a great deal to contend with. Large numbers are chilled and benumbed foraging in the spring, and are unable to return to the hive. The loss of bees in this way, however, is not so serious as the loss from disease, which cold is certain to bring about. Editor Hill says that bees in Florida do not suffer much from disease, and in the West Indies foul brood is not prevalent, while in some of the islands it is said to be unknown. The more honey bees have to consume in order to keep up the temperature of the hive, the more they exhaust their vital powers, and the more susceptible they become to disease, i. e., the less is the resistance to the growth of the bacteria." This is an interesting point in regard to the propagation of foul brood worthy of the attention of W. J. Tefft, Geo. Rockenbauch and the Cuban bee-keepers generally along the northwest coast of the island.

YELLOW JESSAMINE.

MOUNTAIN LAUREL.

THE AMERICAN BEE-KEEPER

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H. E. HILL, - EDITOR.

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H. E. Hill,
Fort Pierce, Fla.

Subscribers receiving their paper in blue wrapper will know that their subscription expires with this number. We hope that you will not delay favoring us with a renewal.

A red wrapper on your paper indicates that you owe for your subscription. Please give the matter your early attention.

Editorial

The National Bee-Keepers' Association meets next month at Los Angeles, Calif.

The next number of The Bee-Keeper will have something in regard to the new foul brood cure—formalin gas—and its originator.

OUR QUEEN-BREEDERS' DIRECTORY.

We invite the attention of our readers to the Queen-Breeders' Directory which appears in this number. We have undertaken to establish this as a regular feature of the Bee-Keeper, and thus keep before our readers a very complete list of reliable breeders, for reference.

We frequently receive letters from subscribers soliciting advice as to the best place to order queens of some certain race or strain. While we always endeavor to advise to the best advantage of our readers, it would be eminently more satisfactory if each one would keep himself informed upon this point, and depend upon his own judgment in the matter. Space in our regular advertising columns is rather expensive for a year-around advertisement, and we have, through the Directory, offered a means whereby every breeder of good stock may keep his announcement constantly before the queen buyers reached by the American Bee-Keeper. The price of a card in the Directory is $3.00 a year, cash with order.

The absence of any breeder's name from the Directory, should not be construed to imply unreliable stock or faulty business methods; but we aim to exclude any advertisement which we have reason to believe might cause our readers any disappointment, and we think queen buyers will naturally prefer to patronize those who are sufficiently enterprising to keep them informed as to what they have to offer; and the editor will be grateful to those readers who, when ordering queens, mention the Bee-Keeper when writing to our advertisers.

Reliable breeders and queen-dealers everywhere are invited to take space in the Directory, on the terms specified above. Copy and remittance for this department may be sent to either office.

DR. O. M. BLANTON.

By turning to another page of this number of the Bee-Keeper, the reader may see a late and excellent portrait of Dr. O. M. Blanton, of Greenville, Miss., one of the foremost apiarists of America and a historical figure in his home state, where "Cotton is King."

The Doctor will celebrate his 75th birthday this month, and is the oldest native of Washington county, though still vigorous and as enthusiastic apiculturally as ever.

We believe Dr. Blanton used to have about 400 colonies, but of late years has been somewhat below 200. However, he is again endeavoring to increase to the former number, and at present has something like 235, though he does nearly all the work himself. The original forests which formerly afforded a very profitable forage-ground for the bees have, of course, been largely cleared away to make room for cotton fields, and the nectar-secreting trees and plants are much less abundant than in earlier days, there as elsewhere; though the cotton bloom is itself a source of nectar supply.

In early days Dr. Blanton was quite a prolific writer on apiarian subjects, and we are pleased to have called forth from his pen a series of late articles, which we are sure our readers will find exceptionally instructive and interesting, and Bee-Keeper readers will doubtless share our pleasure in learning of the excellent health and apiarian success which our venerable brother is permitted to enjoy in the evening of his long and most exemplary life.

On page 149 of The Bee-Keeper for June, reference was made to the plants yellow jessamine and mountain laurel, both of which are said to secrete a poisonous nectar, and on page 137 we gave our readers a good illustration of a dense growth of the former, which Mr. Harris described interestingly. It is rather a noteworthy incident that there appeared simultaneously pictures of both of these plants in the June number of Art and Photography, a photographic magazine of Atlanta, Ga., and through the kindness of the publishers we are this month enabled to present them to Bee-Keeper readers. As a matter of information, in this connection, we quote the following, written by G. Small, in Australasian Bee-Keeper for April: "I see by to-day's paper (March 24) that a man named John Crotty, storekeeper at Oparau, near Auckland, was poisoned through eating honey. This is the second time that such a thing has taken place near Auckland, and there is no doubt that it is through some kind of flower from which the bees gather the honey." This is from New Zealand, and tends to corroborate the theory that the nectar secretion of certain flowers is poisonous to human beings. Such experiences are, however, very rare, and it is not likely that a knowledge of the fact will materially decrease the consumption of honey.

Some time ago Arthur C. Miller, in Rocky Mountain Bee Journal, put forth a nice argument in opposition to the suggestion that Cuban honey should be excluded from American markets by a higher import duty. Mr. Miller's plea was based upon the fact that the greater part of Cuban honey is produced by Americans in Cuba, and his comments were actuated by a keen conception of our moral obligations one to another, as a fraternity. In a later number of the same journal, C. Stimson, without direct reference to Miller's expressed views, takes occasion to confirm them, and says: "I have no fears of pure honey from Cuba or any other place, whether produced by Americans or aliens, injuring our market. But bee-keepers should fight adulterated honey unanimously. Pure honey increases the demand for honey, because honey is far better and wholesome than adulterated sweets. Adulterated and imitation honey decreases the demand, because people do not like it." Mr. Stimson evidently regards excessive profits exacted by dealers, and adulteration, the most baneful elements to be combated, and suggests local, state, national, or even international organization of bee-keepers as a remedy for the evils mentioned.

We recently published a communication from a New England reader who took occasion to proclaim to the world our utter unfitness to conduct a bee journal. It doubtless savors somewhat of immodesty for us to publish the good things which come occasionally to encourage our efforts, and we therefore seldom do so. However, as an example of the widely different views of our readers upon this point, we beg to present in contrast with the views of our New England friend (?), as expressed on page 108 of The Bee-Keeper for April, a few lines from a

British apiarist whose name is known around the world, as a progressive and capable bee-master, and which reached this office June 11th: "I am much pleased with the American Bee-Keeper. I look forward to its coming with pleasure. Although I have kept bees for more than fifty years, endeavoring to progress with the times, I find much that is both interesting and instructing, and there is no bee paper in the English language that can, in my opinion, compare with it, for its articles and general tone and conduct." Such kind comments are exceedingly encouraging; yet there remains a vast field for improvement in The Bee-Keeper, and they would soon be introduced if our readers, generally, were less reticent.

This journal has for years maintained that the most important problem with which the American honey producer was confronted was that of markets,and the passing of time strongly confirms the tenability of our position. If bee-keepers are unable to get together on a national basis to effect a systematic handling of the honey crops, they should, at least, co-operate through state organizations, which might ultimately be merged into one grand American institution. The prices and demand for honey have fallen below the profitable limit, especially as relates to extracted honey, in the states which have yet failed to organize, and rely upon individual efforts. Though the Bee-Keepers' Review met with but slight encouragement in its efforts to do something for bee-keepers along this line, it deserves a vote of thanks from the fraternity for the efforts it exerted in behalf of national organization in marketing our product.

The following clipping is from the Platteville (Wis.) Journal, a paper published in the home town of N. E. France, and shows the general manager of the National Association in a new role. In his present position, Mr. France is a terror to evil doers: "N. E.France superintended the capture of three honey thieves at Soldiers Grove last week. He learned that a raid was contemplated upon the yards of a member of the National Association of Bee-Keepers, of which he is manager, and he took the matter personally in hand. He placed spies in the yards, and when the fellows came around, they were captured and plead guilty. Mr. France is as good at trapping honey thieves as he is proficient in trapping other animals."

Dr. Miller and the editor of Gleanings are troubled, when clipping queens, by the queen's habit of crawling up on the hand, instead of going back upon the comb, as would seem proper for her to do. The doctor suggests the use of a leaf or other small object upon which she may run, and then be laid upon the frames. It would seem that either of these gentlemen should have had by this time sufficient experience in clipping queens to do it without so much fuss and feathers. When the doctor has been in the business a little longer we think he will recognize the advantage of clipping without removing the queen from the comb, and then this trouble will be at an end.

In a letter dated May 26, Dr. Blanton tells of an exciting experience with bees, which is quite out of the ordinary, as follows: "A truck gardener one-fourth mile distant has one and one-half acres of mustard in bloom, and it seems as though all the bees in the apiary are after it. Wind was high and the bees flew close to the ground. A negro, 150 yards from the apiary, was plowing across their course and they stung him terribly. He ran with hat off, and the mule ran at race-horse speed, with plow attached, to the house. I had the man bathed with cold water and stings removed, but he had high fever last night."

Basswood is taking the place of pine for many purposes. In former years, no one thought of using anything but pine or poplar for the siding of houses. Basswood is now being used extensively as a substitute, and as a result of this new demand, basswood has gone up, thus affecting thousands of manufacturers who have use for it. The logging season last winter in the north was very short, and millions of feet of logs which were cut are still lying in the woods. This shortage in the supply of basswood has made it scarce the past season, but it is thought that a good season will bring out a large supply for next year.—Ex.

Mr. Lawrence C. Miller, the queen breeder of Providence, R. I., has sent us for trial a pair of scissors especially for clipping queen's wings. We have always heretofore used a knife for this work with satisfaction, but the new shears appear to have been especially designed for the purpose, and we have no doubt that the job could be accomplished very dexterously with this new instrument. We are awaiting an opportunity to test them, and anticipate complete success. We are inclined to think this is the same tool of which Mr. Arthur C. Miller writes in this number, as being so satisfactory in his hands.

By a postal card, dated May 30th, Pat informs The Bee-Keeper that his bees are "working fearfully" on mangrove in his new location, which, he says, is "ten minutes on a row boat from Cabanas." He has built himself a nice story-and-a-half house on the bay, from which he can go to Guanajay by stage for a silver dollar, and thence "by rails" for another dollar of the same cheap kind to the Cuban capital. He reports weather dry and windy. Pat has been in the habit of baking his own flap-jacks for some time, but the new house report savors of a more varied menu, to be prepared by a feminine hand.

The complaint of low prices and insufficient demand is not confined to America. The plaint goes up everywhere, the world over, where modern methods of honey production prevail. Our advice to the small producer is to see that the smaller towns and villages in his vicinity are amply supplied, and to avoid the large cities. Warehouses in these great trade centers are loaded and overloaded with honey from the heaviest producing sections of the country. Blaze a new trail for yourself, and shun the beaten paths of commerce.

On June 13th, Mr. J. B. Case, Port Orange, Fla., reported very active business in his apiaries, while scale-hives had been gaining about three pounds per day for two weeks previous. This is the same "Case" who broke the record in Florida in 1894 by harvesting an average from his apiaries of 420 pounds per colony. Though exceedingly modest, and otherwise moderate Mr. Case will occasionally indulge in extremes when it comes to honey crops, and has a faculty for rather "scooping" the other boys.

As will be noted in another column, Mr. Thomas Chantry, president of the South Dakota Bee-Keepers' Association and a member of our staff of writers, has removed to California, and will favor us soon with a batch of notes taken by the way. As to the superiority of Mr. Chantry's stock of bees at the old Dakota home, of which he writes, we have some personal knowledge, as Mr. Chantry has upon several occasions very kindly sent the editor of The Bee-Keeper queens of this stock.

The past two months have been productive of more renewals upon our subscription list than any like period for six years past. Though it has taken the editor several days to attend to giving proper credit for these on the books, it has been a most pleasant task, and he begs to assure each reader who has contributed to his labor along this line, of his sincere appreciation of the favor. We hope many more will avail themselves of the present opportunity to renew for three years for one dollar.

From an invitation with which the Bee-Keeper was favored early in June, we opine Mr. Homer H. Hyde, of Floresville, Tex., is, ere this, a benedict, and Miss Lizzie E. Adams is his bride, as the date set was June 18th. Mr. Hyde is, by far, the weightiest "chunk-honey" advocate of the Lone Star State. The Bee-Keeper's wish that the pathway of life before Mr. and Mrs. Hyde may be lined with nectar-secreting flora, is very sincere.

Mr. Wilmon Newell, who has for some time past had charge of the experimental apiary at A. and M. College Station, Tex., has resigned to accept a position as assistant entomologist of Georgia. Mr. Louis Scholl, Hunter, Tex., has been appointed to fill the position vacated by Mr. Newell in Texas. Both are hustling, bright young men.

One of the poorest seasons for honey ever known, has been experienced by Australian bee-keepers.

"The bees of any colony must feel their need of a queen before they will rear good queens. I do not mean to say that they must be queenless, but they must feel that their queen is failing and that they must replace her, then they will exert their energies in the effort to raise a queen that will be all that is required of a queen," says an old queen breeder, in Australasian Bee-Keeper.

American honey dealers announce a heavy supply of Mexican and Cuban honey in competition with the home product this year. Our 'Sister Republics" are administering large doses of their excellent honey in genuine sisterly style. The doses are, in fact, too large to swallow comfortably by the American producer of the extracted article.

Of all the beautiful monthly magazines none are quite so delightful to the writer as "Country Life in America," published by Doubleday, Page & Co., of Harrisburg, Pa., and the June number is of unusual interest by reason of a splendidly illustrated article entitled, "Bee-Keeping for Pleasure and Profit," by W. Z. Hutchinson.

We believe more is now being written in favor of the old German bee than at any time since the advent of the Italian "craze;" showing that the rearing of German stock for the market is a future possibility. The "blacks" certainly have their admirers, even in the Twentieth Century.

Supplementing their market quotations from Kansas City, June 9th, Messrs. Hamblin & Sappington write: "Rain and no sun. Bees have made no honey to date. White clover in full bloom. Our bee-men report hives full of bees which, with sunshine, would make up for lost time."

Jamaican enterprise, in utilizing the English markets, is proving a decided success to the Jamaican bee-keepers; but this same Jamaican enterprise is the lament of the Australian producer of honey. Taken all in all, the apicultural situation in Australia is not exceptionally propitious.

Low prices, as a result of crude methods of production and lack of system in marketing, is the wail of G. Small, of New Zealand, in Australasian Bee-Keeper. Mr. Small pleads for organization among bee-keepers of New Zealand, as a means of relief.

"A Preliminary Investigation into the Cause of the Infectious Bee Diseases Prevailing in the State of New York," by Dr. Veranus A. Moore and Prof. G. Franklin White, has recently been issued in bulletin form by the agricultural department of that state.

Those who have foul brood to contend with are afforded much comfort through the recent experiments of Mr. C. H. W. Weber, and the results of formalin gas in the treatment of infected stock, which he has recently given to the bee-keeping world.

Idaho has organized a State Honey Producers' Exchange, and the American Bee-Keeper's esteemed young friend and correspondent, Mr. E. F. Atwater, of Boise, has been elected treasurer of the new organization.

FOOD ADULTERATION.

Press Bulletin No. 29, issued September 1st, by the Florida Agricultural Experiment Station, deals in a very logical manner and forcibly with the above problem. Food for thought is therein afforded the inhabitants of other states than Florida, though the bulletin is addressed especially to the latter. We extract the following:

Cotton seed oil is very useful, and is not injurious for use in salad dressings and for other purposes where such an oil is required, but to ship it to Europe and there have it refined and returned to us and placed upon the market as pure olive oil, is most assuredly a fraudulent proceeding. Distilled or spirit vinegar can be manufactured at a very small cost, but the ingenious manufacturer labels it "apple" or "cider" vinegar, and it is retailed to an unsuspecting public at the price of a genuine apple vinegar. Peppers and spices containing a high percentage of adulterants in the form of hulls, beans, peas, ground olive stones, etc., are sold as genuine. Coffee is adulterated with chicory, peas and imitation coffee, made of pea hulls and a wheat product. Lard is adulterated with beef fat and cotton seed oil and sold as pure lard. Much of the extracted or strained honey that is put upon the market, is made by flavoring glucose syrup with a small amount of honey. Extracted tea leaves are used to increase the profits on tea. Of eighteen samples of lemon extract examined by the State analyst for the Illinois Food Commission, only three contained oil of lemon, and all of ten samples of vanilla extract were adulterated, though sold as "pure vanilla." The same authority states that "the only adulterations in jelly are artificial body, artificial color and artificial flavor, with perhaps the addition of preservatives." Such jellies are composed largely of starch, paste and glucose, colored with analine dyes and flavored with ethereal flavors. A somewhat better grade of jellies, jams, fruit juices, etc., is made from parings, cores, and decayed fruit and put up with glucose, a material much cheaper than cane sugar. A number of the states have laws regulating the manufacture and sale of food products, but in states where no such laws exist the consumer is forced to take what he finds upon the market and suffer the consequences. It is not necessary that the adulterants which are not injurious should be entirely prohibited, but it is important that the packages should be properly labeled; that is, the name of the adulterant, dilutent or preservative should be made a part of the label, and then if the consumer prefers to use an adulterated article at a correspondingly lower price he does it intelligently. The report on the Inspection and Analysis of Foods issued by the Kentucky Agricultural Experiment Station for February, 1902, contains the following: "The prohibiting of the sale of all injurious articles, and compelling all imitative, artificially preserved and adulterated articles to be so labeled, and to be sold on their own merits, is bringing a noticeably better class of foods to the Kentucky public." If Kentucky and other states having a food law are getting a better class of food, is it not possible and even very probable that Florida and other states having no such law are getting more and more of the adulterated goods which cannot be sold in states having the law? This is no indifferent matter; it is far-reaching in its effect, both on the health and the morals of a community, state and nation. The continued consumption of inferior and harmful food products by any people must of necessity result in the physical and moral deterioration of that people; while the fraud and deception which must constantly be practiced, destroy competition and force the otherwise honest manufacturer and dealer to adopt methods which he knows are questionable.—A. W. Blair.

Mr. Fred W. Muth, president of the honey-dealing corporation which bears his name, at Cincinnati, was a pleasant visitor at the Bee-Keeper sanctum recently. Mr. Muth was circulating among the producers of the state in the interest of his house, and incidentally casting the line for heavy fish, for which sport he has a marked fondness, with a particular liking for whales and shark of the man-eating variety. While on the coast Mr. Muth landed a specimen of the latter entirely too large to have its avoirdupois stated in figures to an incredulous public. "Fred," as he is known by his more intimate acquaintances of the fraternity, made many warm friends on the East Coast.

Mr. John W. Pharr, of Berclair, Tex., writes that he has acquired the interest of C. B. Bankston in the New Century Queen-Rearing Co.. of that place, and he is now sole proprietor of the concern.

That little bird of ours that gets around among the bee-keepers of the country, intimates that the world will add to its bee lore, one of these days, a book on queen-rearing by "Swathmore."

The Texas Bee-Keepers' Association will convene at A. & M. College, College Station, Tex., July 7 to 10. Louis Scholl, Hunter, Tex., is secretary of the Association.

The bee-keeper who solves the problem of converting his honey into beeswax at a ratio of three to one, will have found the open sesame to wealth by apiculture.

The American Bee-Keeper three years for one dollar. Rather a cheap and useful present for a bee-keeping friend.

HONEY AND BEESWAX MARKET.

WASHINGTON GRADING RULES.

Fancy.—All sections to be well filled, combs straight, of even thickness and firmly attached to all four sides; both wood and comb unsoiled by travel stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy white," "No. 1, dark," etc.

Kansas City. June 9. — Market cleared. Extracted, 6 1-2 cents.—Hamblin & Sappington.

New York, June 8.—The demand for honey is quiet with plentiful supply. Price of comb, 8 to 10 cents. Extracted, 4 1-4 to 5 cents. Beeswax is scarce and in good demand at 30 to 31 cents.—Francis H. Leggett & Co.

Chicago, June 5.—The market is lifeless, no movement except in extracted at low prices. Best grades of white extracted 5 1-2 to 6 cents per pound; amber, 5 to 5 1-2. Comb honey is held at 15 cents for choice white and anything not grading up to meet this requirement sold at 2to 5 cents less per pound. Beeswax wanted at 32 cents per pound.— R. A. Burnett & Co., 199 South Water St.

Buffalo, June 8.—The demand for honey is exceedingly quiet, and prices must be cut. We quote strictly fancy comb, 15 cents. Other grades range from 7 to 13 cents. Extracted not wanted. Beeswax wanted at 25 to 33 cents.—Batterson & Co.

Cincinnati, June 1. — Very little change in market since last report. We quote amber extrade grades 5 1-2 to 6 1-2 cents in barrels. Clover, 8 to 9 cents. Supply equal to demand. Comb honey, 15 to 16 cents, for fancy. Beeswax, 30 cents.—The Fred W. Muth Co.

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6-03-tf]

Queen=Breeders' Directory.

This page is intended as a guide for queen buyers, from which they may select the stock desired, and breeders are invited to make use of it for their announcements, at the rate of $3.00 a year per card, payable strictly in advance.

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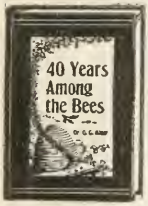

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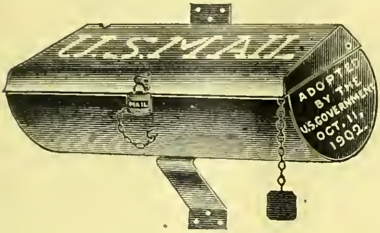
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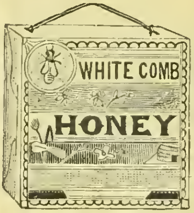

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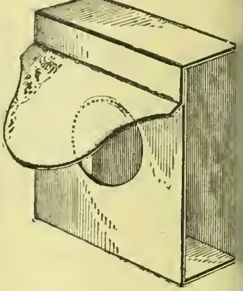

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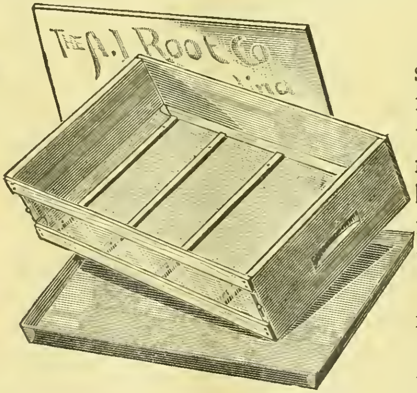
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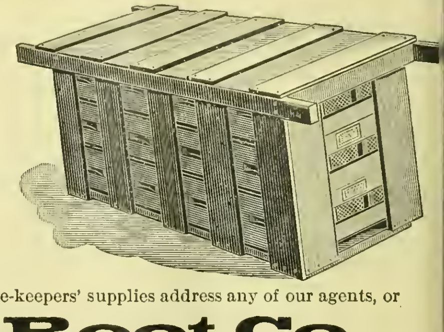

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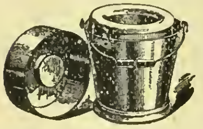

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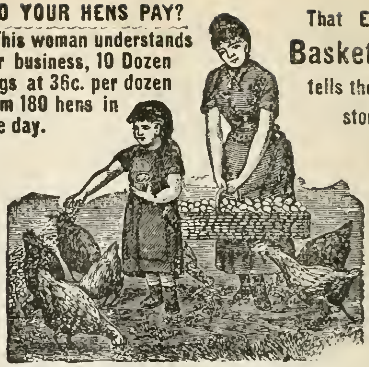

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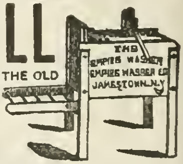

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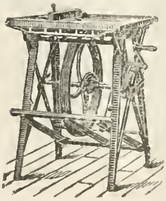

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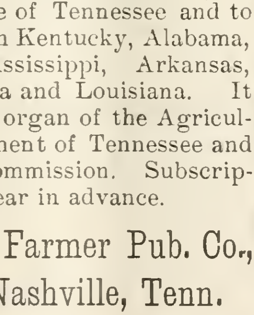

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THE AMERICAN BEE-KEEPER

Published Monthly by The W. T. Falconer Mfg. Co.

Vol. XIII AUGUST, 1903 **No. 8**

A MEDLEY.

(The Editor.)

As HAS BEEN stated in previous issues of The Bee-Keeper, Mr. O. O. Poppleton comes with his bees every summer to the vicinity of Fort Pierce to secure the mangrove honey harvest. This season weather conditions hereabouts have been such that bee-keepers have often found time more pressing than apiarian duties, and as a result the editor's sanctum has frequently been enlivened by discussions and social bee-chats with this venerable apiarist. Under such conditions it has not taken long for Mr. Poppleton and the writer to sift the wheat from the chaff, as dished up in the columns of the various bee journals of the country, as they have arrived. Mr. Poppleton's long, varied and successful experience with bees enable him to grasp very quickly the most minute points having a bearing upon the practical side of apiarian questions. The fact that his hive is of the type known as the "Long Ideal," and is, therefore, all on the "ground-floor," keeps him in constant touch with the operations within the brood chamber, and it is doubtful if anyone in the United States is quite so conversant with the particular and minute points which have to do with bee life in the brood chamber. Aside from this, his habit of carefully reading the journals, and a mind naturally alert for that which is good, and no less keen to detect error, guided by mature experience, render him a most agreeable companion to those whose interest centres upon similar lines of thought.

WILD CUCUMBER.

Out at the convention of Chicago-Northwestern people, in Chicago, as reported in the American Bee Journal, the subject of "Bee-pasture" engrossed the attention of the participants, and wild cucumber came in for consideration, with the result that whilt it was known to yield largely in certain quarters, in others it proved utterly valueless. Mr. Poppleton says is plain enough. Even in this locality, we have two distinct kinds of "wild cucumber," neither of which elicit the attention of the bees. "The fact is," says he, "there are so many different kinds of vines known as wild cucumber, that the word means nothing at all. Doubtless, many of them belong to different families, and their nectar-secreting characteristics are necessarily correspondingly different."

HIVE COVERS.

At the same convention Dr. Nussle spoke in approval of the telescopic hive-cover, claiming a particular advantage in this style of its disinclination to warp, additional air-space above and around the top, and its quality of resisting winds and other disturbing influences, such as cattle, etc. Like Mr. Dadant, Mr. Poppleton is an ardent advocate of this sort of cover, laying especial stress upon the advantage of the air chamber on top. Mr. J. B. Hall, of Canada, uses a deep rim supplied with a flat lid, which has the advantage of supplying the air space and consequent protection to the hive, with the additional advantage of being somewhat less cumbersome to handle. Our own hive (mentioned elsewhere in this number), affords a circulation of tresh air constantly over the hive, and is exceeding light to handle. We all have our personal preferences in these matters, of course. Mr. T. K. Massie denounces the flat lid most emphatically —wouldn't tolerate them under any circumstances, while, after an experience of twenty years with very many kinds of hive-cover, in combination with a cleated honey-board, we decidedly prefer them to any other style of lid.

COMB VS. FOUNDATION.

In the same journal Adrian Getaz discusses several questions, during which this observation is presented: "A plan that will prevent swarming and secure a moderate increase consists in taking one comb of brood out of each colony every few days and replacing it with a frame of foundation. If the object is merely the prevention of swarming, the operation should be repeated as often as necessary. so as to furnish the queen enough room to lay. That may be as often as every fifth day, or perhaps only every tenth day, according to the size of the brood chamber, the prolificness of the queen, the honey-flow, and other conditions. As long as the queen has enough empty comb to lay in, there will be no swarming unless the queen is failing, or unless the lack of shade and ventilation renders the situation intolerable. It will not do to put in an already built comb; the bees would often fill it with honey before the queen could lay in it. The reverse takes place when the foundation is given. But it is necessary even then to replace but one comb at a time, otherwise a portion of them would be filled with honey, as the queen could not lay in them fast enough to occupy the cells before they would be long enough to hold honey. I suppose that an already built comb shaved down would do as well as foundation, but I have not tried it."

It will be noted that Mr. Getaz advocates the use of foundation in preference to a brood comb because of the additional advantage thus secured by the queen. Here is where Mr. Getaz and Mr. Poppleton collide. According to the experience of the latter gentleman, either a sheet of foundation or a comb which had never been used for breeding purposes, are effectual barriers to the queen's progress—acting, in fact, somewhat as a division board would do in dividing or restraining the brood-nest, according to the position occupied by the said new combs or foundation: whereas, if given a brood comb which has been formerly used for breeding purposes, she is quick to avail herself of the opportunity to extend her egg-laying operations. It is understood that during the height of the season when brood-rearing is being pursued strenuously, the queen will quite readily take to "any old thing" in the way of combs, whether old or new, or whether full sheets or starters are used; but the point is, the queen's individual interests are greatly assisted by the use of old brood combs, under all circumstances.

SPREADING BROOD.

Under the heading, "Spreading Brood," in the July number of the Bee-Keepers' Record (British) Mr. L. S. Crawshaw notes this unmistakable preference of the queen for old brood combs, and also corroborates what we have so often observed in these columns in regard to the subject mentioned—spreading brood—and the necessity of experienced hands in carrying the practice into execution. Mr. Poppleton considers the article one of the best that has ever been published upon the subject, and recommends its reproduction without a word of change. We, therefore, give the article below:

How much may have been written upon this subject I cannot conjecture, yet the matter periodically crops up for advice in the columns of this journal, owing no doubt to the "differing of the doctors." I have before me as I write a variety of text-books which refer to the subject in terms ranging from those of an eminent authority who builds up in this way the whole of his colonies, to those of one who desires to see this manipulation banished from the pages of all journals.

Between these two some truth must lie, or it would even seem that both may be right, as what is meat to one eater may be poison to another, and this particular manipulation may bring success or disaster in the hands of different operators. I do not know but that the latter is the view I would more readily support, as the practice may be a dangerous pitfall for the novice with his possibly weak colonies and poor queens, whilst conversely, the better the queen the less necessity for artificial brood-spreading; and as the quality of stock should be carefully improved year by year, and the number of old queens limited, the operation should be theoretically a diminishing quantity even in expert hands.

Precept and practice, however, do not always walk hand in hand, and whilst I would not indiscriminately preach the spreading of brood, on account of its possible ill effects, I yet consider that, when intelligently done, there may be undoubted gain. Too often the underlying principles of such matters are entirely ignored, and the spreading of brood by a beginner is often practiced haphazard upon the strength of a text-book reference, whereas it is essentially an operation to be labelled, "Not for the inexperienced." I hope to be able to indicate simply some of the conditions necessary to success, and thereby, perhaps, point out the danger once again, it being understood that I do not wish to dogmatize upon the subject, nor have I much that is new to offer, the formation and expression of my own opinion being simply based upon the experiences of others, tried so far as possible, in my own operations.

First then, the prime object of spreading brood is a rapidly increased brood nest, having in view the opening of the honey season, before which date a crowded hive is desired. Foundation should never, in my opinion, be used for this purpose, as brood is wanted, not early or cheaply-built combs, and the two purposes must not be confused. Every comb so built in spring is built at the expense of the very life of the bees, for though, if absolutely necessary owing to shortage, combs may be built in this way, yet the heat necessary for their production is obtained at the expense of the consumption of valuable stores which should be used as brood food, whereas the combs can be produced more cheaply later in the year when the bees have "surplus heat" at their disposal. Too often the bees attack the foundation with obvious reluctance, the corners remaining in this state for long, with every incentive to damage or warp. Of course they may be worked out in this way later in the year, when honey is coming in, by such stocks as are too weak to store much surplus, but they would be better given to swarms, or to special stocks devoted to the purpose.

To obtain the best results with spreading brood, fully-drawn combs free from old pollen should be given. This may save the disappointment of comb cut down, and drone comb built; but if frames are inserted in the centre of brood nest I would give preference to clean old combs, then to new ones. Queens appear to lay more readily in combs in which brood has already been reared, and I have had cases where a perfectly new comb on either side of the brood nest has seemed to confine its area until such time as the bees were forced to expand.

It is better that the combs should contain stores, as the uncapping and traffic of the honey in the hive has a highly stimulative effect, owing no doubt to the more frequent feeding of the queen. The operation must, however, depend upon the condition of the season and the hive. It cannot safely be practiced before permanent warm weather has set in, judged by the minimum temperature of the night. It is also apparent that a well-packed double-walled hive is more likely to obviate chill than one thin and poorly protected. I have sometimes seen brood spread to the extreme outside comb next to a thin single wall, with the inevitable result that bees on the point of hatching were ruthlessly and wantonly exchanged for a few eggs, the worst possible of such bargains with the bees! The age of the queen must also be considered. A young vigorous queen will probably rear all the brood advisable, while an old queen may be fairly hustled into doing better than her own best. Would it not be better to have all our "honey stocks" headed by just such fine young queens?

Where small patches of brood are naturally begun upon additional combs, it is perhaps inadvisable to insert a new one, but the brood-nest might be left alone, as the step once taken the bees will now extend rapidly, though artificial extension may, if still desired, be obtained by placing these combs in the middle.

Where the brood-nest shows its outer combs next to the pollen combs, well filled with hatching brood and well covered with bees, a comb may be fairly inserted. The "spreading" must, however—and this is the main contention—depend upon the quantity of bees and not of brood. When the bees are covering more combs than contain brood, extension may be safely practiced, but where the brood nest has already reached that common condition of early summer, the combs well filled with sealed brood, but thinly covered with bees, leave it alone. In other words, the spreading of brood by the insertion of more combs may be fairly practiced where the colony is making little or no progress for no apparent reason than a disinclination on the part of the bees or queen to extend. The operation is of value as providing combs free from pollen-clog and drone cells in the best place, for while drone comb is often occupied without any apparent justification of a desire to swarm on the part of a weak colony, drone-rearing and swarming on the part of even strong colonies may be, to some extent, retarded by extension of the brood-nest in proportion to the bees.

If the advance of the season has been well gauged in relation to the sequence of brood-spreading operations, supers may be put on with the last of the "spread," which might be about ten days before the beginning of the honey-flow, as the bees thus have surplus room in advance of their requirements, and can become accustomed to an excluder before the necessity for it.

The indications of injudicious spreading of brood are very simple. The queen ceases to lay in the outer combs of the nest, and in bad cases the brood is largely chilled owing to the incapacity of the bees to keep it warm during cold nights; a colony in such a case often failing to recover from the set-back until too late in the season, so that I would here emphasize the warning to the beginner that more harm may at times be done by the indiscriminate use of our powers over the movable frame, and that in this as in many other bee matters, one cannot be too careful.

A LONELY LOCATION.

Something of the Isolated Country of a Honey Prospector on the Florida Keys.

(J. B. Colton.)

EDITOR BEE-KEEPER: Your kind answer to my inquiries came to hand June 2nd, for which accept my thanks. I am located on Key Largo, about 120 miles from Key West, quite out of the world. There is one postoffice 20 miles from here, but I depend on the fruit schooner to bring mail from Key West as there is no regular trips made by boats between here and Miami; just neighbors occasionally going with their produce. I am only forty miles from the latter place, a lovely little city with fine buildings, big tourist hotel, point of departure for regular line of steamers to Key West, Havana, and in tourist season, to Nassau.

Yes, there is some natural bee-forage at Key West. I was there last winter and found that bees were doing fairly well. The bee-keeper there did not think the pastureage good enough to justify keeping his apiary there and has moved to Largo, but the change as far as I can learn has not pleased him as he expected.

I wish I was better posted on the bee pasturage of the Keys. It might be quite interesting to the few who have been hardened to mosquito torture and tropical heat, which is more than most people would be willing to bear. It is all right by the shore or on the sea when there is a good breeze, but behind the mangroves; oh, my! There are probably some fine locations here for bee-keepers. On Loney Key there are thousands of cocoanut trees. Some of the Keys have more or less cabbage palmetto, but few have much saw palmetto, as far as I can learn, and that found at Miami, which is plentiful enough, seems to yield but very little honey. I am afraid Mr. Morrison is "off" in regard to the value of cocoanut bloom. There is quite a grove in Miami at the Royal Palm Hotel. There are a few in my neighborhood, always covered with bees, and at Cape Sable and along the Keys there are thousands of them. A small apiary at Miami yielded so little profit that the bee-keeper gave it up, and one at Cape Sable has been moved; still I am not quite satisfied and hope to be able to test their value some time in the future. What reader of the American Bee-Keeper can give us any definite facts? Speak out, brothers, and don't hide your light.

I have a lot of questions I wish to fire at you, and if the answers would interest the readers of the American Bee-Keeper please give them in the columns of your valuable journal. Has any one in Florida devised any arrangement for evaporating honey either by the sun or any other heat? What is the season for black mangrove to bloom? Is it capricious as regards secreting nectar? Is it of value in the tropics. A gentleman at Key West who had observed its behavior at Cape Sable and other places came to the conclusion that it was of little value south of the Indian river. It was of no value whatever here last season, and has only just showed signs of bloom this season June 19. Our best honey seems to come from the bloom of a tree called "Poisonwood." Who can give me a better name for this tree—one that will not frighten eaters of honey? Will honey evaporate or grow thinner kept in open barrels in Florida? I think this is enough for this time. Wait! You just tell Brother Poppleton if I ever find out when he passes High Mangroves again without calling on his old Iowa neighbor I will put a snag in his way just opposite the landing at High Mangroves.

Key West, Fla., June 23, 1903.

[Mr. W. S. Hart, of this State, has one of the most efficient evaporating devices for extracted honey to be found in the country. Such an arrangement, however, is practicable only for the bee-keeper permanently located.

The season of black mangrove bloom extends over a period from May, on the Keys, to August on Indian river north. In the vicinity of Indian river the first bloom usually appears about June 1, and continues through July.

Though it is not considered a very certain source of nectar supply, under favorable weather conditions, it is probably as reliable as most other forage trees.

As to its habits in tropical countries, we would refer our correspondent to recent items in the Bee-Keeper from our friend "Pat," and a contribution in this issue from Mr. Sommerford of Cuba.

We regret our inability to supply the proper name for the "poisonwood" tree, at present.

As a rule honey will become thinner by exposure to the atmosphere of Florida; especially is this true of the mangrove season.—Editor.]

SELLING HONEY.

Som Excellent uggestio s to the Beginner.

(Arthur C. Miller.)

PRODUCING a lot of honey is but half the battle, and to many the easier half, while selling it to the best advantage it often far from easy. Salesmen are born, not made, but even if one is not born a salesman they may, by forethought, care and perseverance succeed far beyond their expectations.

When I first began to produce more honey than could be consumed at home I sold it to the neighbors. I just went about among them and sold it as I had sold berries when a small boy. I knew them and they knew me; if they liked honey they bought. That was simple, but a little later, when I sought a city market I found very different conditions. The merchants were prejudiced against "strained" honey. All sorts of mixtures had been dumped upon them and their customers declined to be dosed any more. Each store visited only added to the seeming hopelessness of the case. At last I went to a grocer I knew well and got him to let me put in two dozen pound-bottles (Muth's jars), I agreeing to take them away if not sold, and giving him 25 per cent commission on all he did sell. It was a heavy per cent, but the business was a small matter and in a way a bother to him. He agreed to keep the honey in a conspicuous place and to recommend it to his customers.

Very slowly it went, but at last it was all gone and I put in more. Then I tried another grocer on the same lay but on a smaller commission and after several visits succeed in getting them started. As soon as I had them secured I went to other grocers again, said "so and so" are handling my goods, etc., and finally got customers enough to take all I had to sell. I tried to estimate about how much each store would need and reserve enough honey to supply them until the next crop. The honey was good; its sale increased and I soon found I must buy if I was to hold my trade. So I bought, trying to get a flavor as near as possible to my honey. It was not like it and I came near losing the whole trade. It took a lot of explaining and a lot of special labels telling the kind of honey, difference in flavors of honeys from different sources, etc. After that I took to blending honeys and found it most satisfactory. The only trouble lay in putting together honeys of different specific gravity. I found it necesary to warm them almost to the limit of safety, stir them well and then they would mix perfectly, otherwise the bottled "blends" looked streaked and there was trouble quick.

I well recall one suspicious grocer who catered to the German trade—he was a German himself. The slightest sign of a streak meant war. I finally won his confidence and he became my largest customer. His trade preferred basswood honey, and most of them wanted it granulated hard. I had to sell to him at a low price, but he took large lots, large packages and I never had to take back granulated honey. Today, grocers of this city offer jars of granulated honey without hesitation or explanation. The public are educated to it.

The honey business was a "side line" with me and soon called for more time than I could spare, so I sold it out, confining myself to producing honey for home use, selling any surplus to the man who bought my business.

To the bee-keeper who is just commencing to sell honey I would say, sell only really fine honey, keep the flavor as uniform as possible by blending the different kinds, put the honey in neat packages and have them absolutely free from stickiness or dirt. Approach the customers in a frank, straight-forward manner and if you get "turned down" take it pleasantly and call again later. Patience and perseverance are prime essentials to a salesman.

Providence, R. I., July 17, 1903.

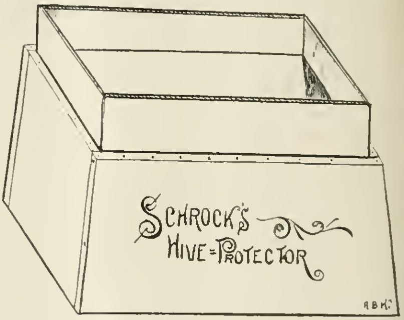
An advertiser in the Irish Bee Journal offers an unusual inducement to buyers of his stock. He says, "This strain has exterminated foul brood." The gentleman ought to send his representative to Cuba.

PROTECTION FOR HIVES.

(H. J. Schrock.)

EDITOR BEE-KEEPER: I enclose a sketch of a protector or shader that I have used for several years. It is intended for single-walled hives, and is made about as follows:

Take a super, or make a box of same size, and nail on the lower edge a strip about one-half inch wide. Make a box (end and sides only) of boards ten to twelve inches wide, so the upper inside edge will be about one-half inch larger than outside of the hive. This box should be made tapering—that is, larger at bottom than top—so it will telescope when not in use, and a number are piled together. Now nail the super with the strips on lower edge, onto this tapering rim, and it is ready for use. Take the cover from the hive and replace the cover.



In winter, when there is deep snow, I bank the snow over the hives, and the protector keeps ice from forming at the entrance. The protector serves several purposes, besides. In the spring it protects the hives from rain and cold winds. In summer it shades the hive and keeps the supers nice and dry; and by placing enameled cloth first upon the hive, then the protector, it keeps out the air, and in winter keeps out mice.

To winter bees, fill top with chaff and stuff straw or fine hay between hive and protector; then fill hive-stand with straw, and the hive is pretty well protected both from cold and wet. It is also handy as a comb-holder, and just the thing to set supers on, as there is no danger of killing bees on lower side of super.

Goshen, Ind., June 25, 1903.

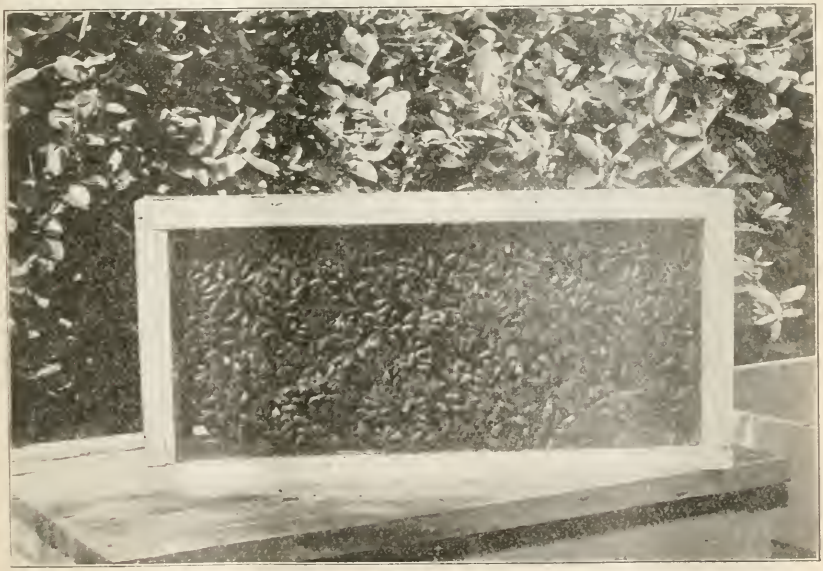
prepared for winter and the little hive stored away for the next season. All these fixings are plain and simple, and any one possessing a little ingenuity can easily make them; try it at least, it will repay you an hundred fold.

Englewood, N. J.

AN OBSERVATORY HIVE.

(F. G. Herman.)

I KNOW of no other way that a person can obtain so much practical knowledge of what is going on inside a bee hive as by observation. When a hive is about to be opened the bees are previously given a little smoke,this, of course,confuses and subdues them and throws them into an abnormal condition for the time being at least; besides the frames have to be lifted out one at a time to be examined. But behold, I show you a better way, which is to make an observatory hive and place it on your front porch, as shown in the picture, which is a street view. There you can see the workings of a colony in a normal condition. You will see the field bees oming in with their loads of nectar nd pollen and depositing them in the lls, you may see the nurse bees feedng the larvae, and the comb builders orming comb. You may also observe he queen laying two or three eggs er minute. Besides you will have visitors by the dozens from far and near, and you will have a great many questions to answer too, but you will sell a great many extra pounds of honey, which will more than recompense you; and there are many more interesting features and benefits to be derived from this simple device which cannot go into this article. If you are using in your hives a movable frame the matter is very simple. Make the two end pieces, the bottom and cover the same length and height as the hives in your yard, but only wide enough for three frames of comb—five inches inside measurement is about right. The sides should be made of good clear window glass. This constitutes the body. The hive cover which has a hole in the center two and one-half inches in diameter covered on the under side with wire netting. This hole is for two purposes, if the bees need feeding a pint fruit jar can be filled with syrup then covered with a thickness or two of cheesecloth and inverted right on the wire,



Herman's Observation Hive.

and the bees will run their tongue through the wire and sip the food. the other purpose is to ventilate the hive in very warm weather. this hole should otherwise be covered with a small block of wood.

HOW TO PUT BEES INTO IT.

Of course it would be useless to put a swarm of bees into a glass hive: a dark hive would suit them much better, the bees prefer darkness to light, inside at least. not because their deeds are evil (which they certainly sometimes are) but because of instinct. About six days after you have a swarm, go to the parent hive and you will find a number of ripe queen cells, from which queens will emerge in a day or two. Take three frames of hatching brood with one or more queen cells well covered with bees and place them into the observatory hive, put on the cover and carry to the porch and adjust your hive in position; some of the old bees will leave, but most of the young ones and those that are hatching out will make it their home.

For best results it is necessary to

PROTECTION FOR HIVES.

(H. J. Schrock.)

EDITOR BEE-KEEPER: I enclose a sketch of a protector or shader that I have used for several years. It is intended for single-hives and maand is made about as the bees. the direct rays of the sun shining through the glass would kill the larvae and drive the bees from the hive. Place the hive in such a position that the sun will not shine upon it. The second reason for the wall is to make a division between the flying bees and the hive. The bees will enter the hive, very rarely indeed is there a bee to be seen on the porch. You may have your family on the porch at any time without fear of being stung. By observing this hive every day one will learn a great many things about bees which are now a mystery. It will also tell you when the honey-flows are on, and when to expect honey from your other hives—in fact, it is a general indicator. In the autumn it can be easily united with some nucleus or weak colony in the apiary and

Mr. Herman and His Family at Home.

prepared for winter and the little hive stored away for the next season. All these fixings are plain and simple, and any one possessing a little ingenuity can easily make them; try it at least, it will repay you an hundred fold.

Englewood, N. J.

OUR CORRESPONDENTS

Caimito, Cuba, June 20, 1903.

Editor Bee-Keeper:

Seeing so much in The Bee-Keeper of "Pat" and Cabanas, his cork method of moving, etc., has induced me to add a few lines to the subject. Mr. "Pat" is no longer at his old, or first location —has moved, once since landing in Cuba and is now moving again, just shoves in the corks and is off in a hurry. It is so easy for him to get ready to move. But I must tell on Pat's corker method. It caught him down here as well as myself. Pat lost 60 of his best colonies on a two-league move. It was too hot for him.

I, too, have tried corks, as I bought the bees of Mr. Ellis that Pat brought over for the honey that they would gather in the winter, Mr. Ellis going back to California.

There was fifty colonies of the bees and they in fine condition, so after tacking screen over the tops of hive bodies in place of covers, I was ready to stick the corks in some of them, as the entrances were still closed and have been since leaving Florida, except the cork hole, one inch in diameter, and just above the real entrance in center of hive. This cork hole of one inch having served full colonies for an entrance for months.

Where the beauty of the cork system came in, was at the wharf, as the boatman that came for the bees brought one, instead of two little boats as he had contracted to do, Pat could only load forty instead of the fifty colonies. Well, when the forty were loaded and boat pushed off, then the corks were pulled in a moment and all humming a happy tune, and off to work until the boat could return for the ten remaining. The corks were saved for the return of the boat.

Pat finds moving so "dead easy" with his cork method, that he just keeps moving; is moving now from where he landed less than a month ago. The mangrove move has paid him, too, as he has taken 300 pounds of honey this week, while others less migratory are feeding.

The mangrove honey here is amber, not at all white as I had supposed, by what I had seen in the journals concerning it.

Bees generally doing better this spring than common, but foul-brood booming.

Yours truly,
W. W. Sommerford.

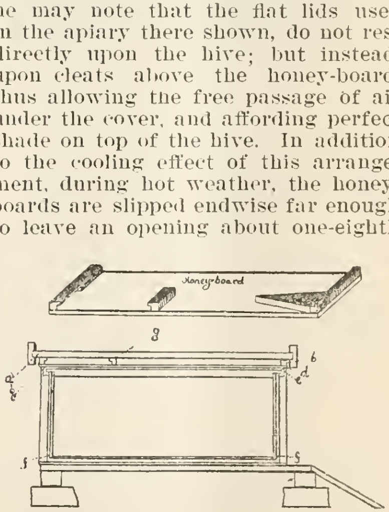
Sagua la Grande, Cuba, June 16, '03.

Editor Bee-Keeper:

I have seen a picture of your apiary in the American Bee-Keeper, and notice there is no shade for the hives. Mine are in the same condition here, and I would be obliged if you will let me know whether this condition is not injurious to the bees.

Very truly yours,
J. E. Larrondo.

During the summer months shade of some sort should be provided for hives. If our correspondent will refer again to the illustration in our April issue, he may note that the flat lids used in the apiary there shown, do not rest directly upon the hive; but instead, upon cleats above the honey-board, thus allowing the free passage of air under the cover, and affording perfect shade on top of the hive. In addition to the cooling effect of this arrangement, during hot weather, the honey-boards are slipped endwise far enough to leave an opening about one-eighth of an inch clear across the back end of the hive, which is sheltered from storm by the heavy cleat of the flat lid. Thus, a current of air from en-



trance to honey-board is secured, and the hive kept reasonably cool. The sectional drawing herewith shown, will make clear the arrangement. For a very exhaustive discussion of this subject, relating to shade for Cuban apiaries, we would refer our correspondent to the American Bee-Keeper for December, 1899, page 197, where it is handled from a practical and scientific standpoint by Dr. G. Garcia Vieta, of Cienfuegos, one of the foremost apiarists of our hemisphere.—Editor.

THE Bee-Keeping World

GERMANY.

In defense of a certain style of hive Reidenbach, the editor of the Thaelzer Bztg. brings out some points in support of full-sized combs versus half-story frames. After testing both kinds of frames he finds that a colony will develop considerably quicker in a hive where bees and queen are not hindered by a multitude of sticks and spaces. He can manipulate two colonies on full-depth frames for every one on half-depth frames. In the same article Mr. R. speaks favorably of the use of comb foundation in the brood-chambers and advises to use the heavy grade. To secure perfect filling of the frames with the mid-rib exactly in center of the frame he drives two wire nails into each end-bar in such a way as to keep the sheet of foundation where it belongs. The same object would be accomplished by stretching one or two wires horizontally between the end-bars. Mr. Reidenbach also says further on, that he is opposed to restricting the queen at any time. He wants his bees to have the whole of the brood-chamber for breeding all the time. Winter losses resulting from starvation and lack of bees are thus prevented, he claims.

Alberty says in Illustr. Bztg. that it is not advisable to furnish young swarms with full sheets of comb foundation on account of their liability to break down. The Gleaner of this has noticed that the bee-keepers in Germany begin to wire their frames and if the objection Mr. A. raises against the use of comb foundation is all the objection he has, then he ought to give wiring a trial.

F. Dickel asserts in Die Beeire that the bee has not the slightest degree of intelligence. H. Mulot does not fully agree with Dickel but thinks the bee at least possesses some little intelligence. He shows that some individual bees seem to be able "to think" better than some others, even of the same colony.

Gerstung has been figuring out that 50 colonies is the most that may be kept profitably in one location.

An effectual method to prevent such combs or bits of combs as are intended to be rendered, being destroyed by wax-moth larvae, is to keep them under water. Ill Mouats blaetter.

Lehzen expresses a desire in Centralblatt that Dr. Miller may send out a German edition of his "Forty Years Among the Bees" for the benefit of the bee-keepers in Germany. (Dr. Miller's book would undoubtedly serve a good purpose if it was so translated.)

Dr. Dzerzon, now 93 years old, intends to be present at the next bee-keepers convention in Strassburg on the Rhein. As the subject he is to speak on he has again selected: "What are the requirements of a bee-hive." Every bee-keeper in Germany will know before hand wnat Dzierzon will say. He has handled the subject at these conventions so many times that it would seem to be an old chestnut. He is convinced that his twin-hive is the best hive in the world and he cannot forgive anyone who does not agree with him.

J. Denler suggests to those who announce themselves as speakers at the next bee-keepers convention to be held at Strassburg, to send him a brief synopsis of their addresses they wish to make, for publication. Thus he expects the discussion following will be of greater value as bee-keepers will have time to prepare themselves. (Pretty good idea.)

BRAZIL.

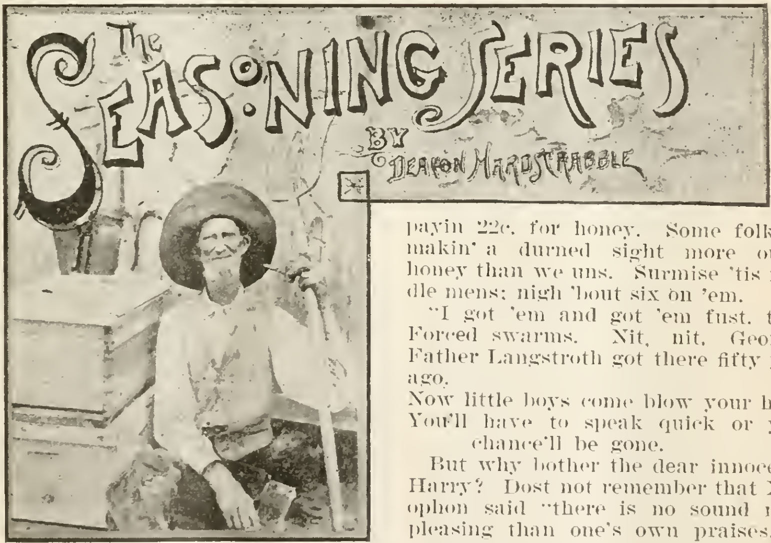
The past honey season has been unsatisfactory in Brazil. Usually by Jan. 18, the larger portion of the honey is taken; but practically nothing has been harvested at this time. A bug, similar to the May-beetle, is destroying the bloom of the Acoute Cavallo, a tree from which a honey harvest is commonly expected.

ITALY.

It has been a long-time practice in the city of Milan to give to a large number of school children every morning a good breakfast at the city's expense. Bread, butter, cheese, salami and chocolate were used principally; of late, a noted bee-keeper, von Sartori, has succeeded in having honey added to the list: thus not only directly increasing the consumption of honey, but also indirectly advertising the use of honey.

The Museum in Naples exhibited a bee-hive containing well preserved comb. It was found in the ruins of Pompei which was covered with the ashes and lava at the great eruption of the Vesuvius in the year 79, A. D.

F. Greiner.



Dear Bro. Hill:

Gleanings for June is great stuff—leastwise in the picture line. Fine apiaries 'mong fine logwoods. Great honey country that Jamaica. Get there quick. Next week "standing room only." Who said anything 'bout hogs?

Kit Clover is a complainin' of a payin 22c. for honey. Some folks is makin' a durned sight more outen honey than we uns. Surmise 'tis middle mens; nigh 'bout six on 'em.

"I got 'em and got 'em fust, too." Forced swarms. Nit, nit, Georgie. Father Langstroth got there fifty year ago.

Now little boys come blow your horn;
You'll have to speak quick or your
chance'll be gone.

But why bother the dear innocents, Harry? Dost not remember that Xenophon said "there is no sound more pleasing than one's own praises.

Natural gas don't satisfy all the boys; some of 'em has took to Formalin. Less tiresome than much talk.

"They never taste who always drink;
They always talk who never think."

That R. I. Miller has bobbed up with a lot of "Whys?" Don't he know children can ask questions that stagger savants. Not every question deserves an answer, anyway.

Don't try to copy Gleaning's way,

cause I said that issue was good, for I didn't say so—I said it was "great stuff."

What d'ye think o' the latest queen from Texas? Oh, but she's a Bowery Maid!

June Review, seen it? Just what d'ye suppose Bro. Hutch was a tryin' to do? Advertised a patent nostrum at one end of the paper and told how not to need it at tother. Just a trifle rough on the advertiser.

In another place says the busy cuss has the most time. Um! Guess that's so. Cogitates on the passing of the old boys:

"Some lie beneath the churchyard
stone,
And some before the speaker."

Ponders on moralizing mortals and urges being more infantile:

"With a smile that is child-like and
bland."

Goes an gets an extra touch on his boot heel. I've been "touched" myself.

Says in the extra touch lies the profit.

Yes, jest so.

Reflects on wind power for hive making. Used largely for reputations also.

Hast seen Progressive (?) for June?

Say, their compositor must a had what Yon Yonson calls the yim-yams. Why, the types even made sense where there warn't none, and they jest plum murdered some of the copy.

"Though an angel should write, still 'tis a devil must print."

"And you can't think what havoc
these demons sometimes
Choose to make of one's sense and
what's worse of one's rhymes."

Ever been to Pennsylvania? Place there called Swarthmore. Noted for its dental college and "Queens" that excell in prolificness, size, hardiness and Gentility.

Gentlemanly queens warranted not to smoke, drink or swear. Blondes or brunettes, wings cut entrain or bias. Married or single as desired. Assorted sizes.

Say, Harry, I now send my queens and drones up in a balloon to a high altitude—that's pretty far up. The wedding in the heavenly ether conduces to the development of that aesthetic "tone" and style which characterizes my queens; and their offspring surcharged with ambition fix their eyes on the top round of the ladder, tie their wagons to a star and slide down the broad highway of honeyed prosperity.

Output limited but I supply my friends while they (the friends) last at $5 each. This is merely for their accommodation.

Them as give men what they really want are the men who are crowned with honor and are clothed with riches.

"The jingling of the guinea helps the hurt that honor feels."

No, no, Harry, my boy; I'm not a thinkin' of nobody in particular.

"In men whom men pronounce as ill,
I find so much of goodness still;
In men whom men pronounce divine,
I find so much of sin and blot;
I hesitate to draw the line
Between the two where God has
not."

—Joaquin Miller.

Yours as ever,
John Hardscrabble.

A NOVICE'S QUESTIONS.

The following questions have been received from a recent subscriber, who should provide himself with a textbook on bee culture.

Please tell me how I can tell robber bees from others, and also how is the best way to stop robbing? If I should send for Italian queens for my hives how would I get them in among the bees?

In bee-keeping literature "robbers" is a technical word frequently met with, and has reference to the bees from other colonies which sometimes attack weak or queenless colonies and by force carry away to their own hives the honey the invaded hives may contain. When robbing is in progress there is always a great commotion about the entrance of the hive being robbed. A little experience will enable the beginner to identify robbers and distinguish them from bees legitimately engaged in honey gathering, or those playing about the entrance of their own hive. It is not difficult to tell whether a bee is loaded with honey or whether she has an empty honey sac. The laden ones are much larger about the abdomen, and by reason of their load present a semi-transparent appearance. If bees are seen to be rushing in and out of the entrance, the loaded ones coming out and the empty ones going in: if they are attacking one another, spinning in pairs upon the ground in front of the hive, and otherwise clinching in mortal combat, the beginner may know that he has a case of genuine robbing on hand.

The remedy is to contract the entrance to such a narrow space, by the use of blocks of wood, that but one bee may pass in at a time. This gives the invaded hive a better chance to protect itself from the intruders. An additional advantage is given them also by placing a wisp of wet grass loosely over this small entrance, and keep it sprinkled for some time. A wet bee cannot fight, and the wet grass through which she would have to pass is extremely discouraging. It is imprudent to use smoke about a hive being robbed. It disorganizes the defense.

The chief cause of robbing is the scarcity of honey in the field. If, at such a time, the bee-keeper is careless and leaves honey daubed about where the bees can get at it, it will almost always start robbing in the apiary. Strong colonies in normal condition and which have a moderately small entrance, are never troubled by robbers. The young bee-keeper should therefore endeavor to keep his colonies strong; or be very careful to not incite robbing by exposing honey during a dearth of nectar in the field. When no honey is coming in, hives should not be opened during the day time, unless covered with a tent to exclude robbers.

There are numerous methods of introducing a new queen to a queenless colony. It is better for the beginner, however, to closely follow the instructions which are always sent with every queen from a first-class breeder. All such questions are thoroughly discussed in the text-books on bee-keeping, and by reading up on the various plans, experimenting and using one's own genius, he will rapidly acquire a store of knowledge which will enable him to practice any of the methods now recommended, and to pursue independent lines better suited to the case in hand than any set of stereotyped rules. It is not possible to introduce a new queen without first removing the old one, unless the colony has by some other means been deprived of the queen. The Benton mailing cage, in which queens are usually sent, with full instructions for introducing, is all that is needed when queens are received through the mails in this way. When it is desired to introduce a queen not received in this cage, the Miller introducing cage serves every purpose. The cage containing the queen is simply slipped down between the combs, where the bees will eat out the candy plug and thus quietly liberate the new queen.

CONTENTION AMONG IRISH BEE-KEEPERS.

While we have been busy with our American Association muddle, our Irish brethren have been having their own time, over the sea. The following is extracted from a letter received recently by the editor of The Bee-Keeper, from a subscriber of the Emerald Isle, which will present the Irish situation clearly to our readers:

The Irish Bee-Keepers' Federation, a co-operative union upon a large scale for the marketing of honey and purchase of requisites has for the past year, been busily engaged resisting a campaign of relentless hostility on the part of a few traders who, until the Federation was formed, enjoyed a monopoly in the sale of bee-keepers' supplies. The traders, not content with legitimate opposition and competition in the markets, proceeded to publish all sorts of violent charges against the Federation, and to attack even individual characters; and they started a bee-paper to carry on the campaign and to wreck if possible the established journal, which is the organ of the Irish Bee-Keepers' Association. The result has been that all the traders and their supporting friends have been evicted from the committee of the association by the vote of the members, and a resolution has been passed condemning in no measured terms the "scandalous charges" and two of the leaders have been removed from the Association's examining board and list of experts, having been found wanting in the knowledge requisite for such offices. Meanwhile the Federationists proceed with their organization, confident in their right to manage their own affairs, and grateful for the timely support given them by the Association.

Occasionally dipping the uncapping knife into water greatly facilitates smooth, easy work.

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H. E. HILL, - EDITOR.

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H. E. Hill,
Fort Pierce, Fla.

Subscribers receiving their paper in blue wrapper will know that their subscription expires with this number. We hope that you will not delay favoring us with a renewal.

A red wrapper on your paper indicates that you owe for your subscription. Please give the matter your early attention.

The Canadians are diligently working to perfect the practical working plans of their new honey exchange.

It seems not to be generally known that rubbing a little tallow or vaseline upon the edge of supers and hives will prevent propolizing.

With the passing of time the popularity of the barrel as a honey package, increases among the dealers and consumers to whom we must look for an outlet for the great bulk of our product. We have it on very good authority that probably eighty per cent. of the extracted honey produced in the United States is taken by the various manufactories of the country; leaving, approximately, 15 to 20 per cent. to be disposed of otherwise. The man who clamors for the little tin package represents the minority class, and his sales are, necessarily, next to insignificant as compared with the man who caters to the manufacturing trade.

Editorial writer, F. L. Thompson, of the Progressive Bee-Keeper, has an apiary in Heddon hives, and seems to have soured to some extent on hives of the sectional type. While he thinks this style very convenient, the idea that bees will breed up faster in them than in other hives, is seriously questioned. While Mr. T. suggests "locality" as a possible explanation of the fact that bees in Colorado will not breed up faster in sectional hives than in the Langstroth, for example, as they are said to do in Michigan, he pertinently asks: "But then, why should there be any possible advantage, even in Michigan, in having the brood-nest space cut in two?" It is rather improbable that anyone should claim any advantage for the "cut" which divides the brood-nest; but rather base their claim of superiority upon the ability to reduce the size of the brood-nest horizontally, and thus confine the animal heat below; laying some claims to benefits derived from an elimination of the bee-space at ends of frames. Mr. Thompson has "been there," and his experience is worthy of attention. It may be, as he says, that this idea of brood-rearing advantages of the sectional hive, is largely "talkee-talkee."

Messrs. Batterson & Co., the Buffalo honey dealers, under date of July 8, give the following gloomy information in regard to their market:

"There is really no honey market in Buffalo at present, and we do not advise any shipments here until the weather becomes sufficiently cool in the fall. We, therefore, do not think it good policy to give quotations at this season."

The following observation is clipped from a copy of the Boston Transcript, nearly twenty years old:

Dr. C. Spencer has been prying into the business secrets of the bee, and thus tells of what he has learned: "In my observatory hive one cell was built against the glass, and that afforded an excellent opportunity of seeing how bees deposit honey in the cell. First, a bee deposited a thin coating of honey upon the base of the cell, making a sort of varnish, as it were, to the base of the cell. The next bee that came with honey raised up the lower edge of this film of honey and forced its honey beneath; the next bee did the same, and this film acted as a kind of diaphragm, keeping honey in the cell. When the cell is full enough to be sealed, the bees commence contracting the opening with wax until there is only a small hole left in the center, when they appear to take one little flake of wax and pat it down over the opening. At any time during the process of filling the cell the honey could be withdrawn with a hypodermic syringe, and the 'diaphragm' left hanging in the cell."

After all that has been said on this side of the water in favor of the tall section, the following, by W. Woodley, in the Bee-Keepers' Record, of England, makes interesting reading, by way of variety: "Regarding tall sections I cannot say much in their favor. I have tried a rack or two and shall do so again this season, but fail to see any advantage in the extra three-fourths inch added to the height or length—whichever way it is worked—over the 4 1-4x4 1-4 inch sections. All I have had so far, have had to go into my second or third quality to clear them. Honey dealers do not want them—the ordinary square honey-dish will not take them when cut out of the section, and the part cut off makes a mess in the larder." After all, the whole thing is merely a matter of personal preference.

Texas is fortunate in having secured the passage of a foul-brood law; but is particularly unfortunate in having failed to secure an appropriation for the carrying out of the new law. In Texas, as elsewhere, it seems that laws without cash for their enforcement and execution availeth naught.

Away back in 1885, President L. C. Root, in his annual address before the Eastern Bee-Keepers' Association, bore down heavily upon the question of increased production of honey, saying in part: "The motto has too frequently been, 'cheaper, rather than better products.' One individual even being injudicious enough to assert that we can afford to produce liquid honey at five cents a pound. This savors too much of the teachings of some whose names are sometimes found under the heading of 'Humbugs and Swindles'." Whether they can afford it or not, Mr. Root has lived to see the day when the names of those who would like to receive five cents a pound for all the liquid honey they can produce, are innumerable. "If you don't believe it," make inquiry of the alien apiarian element of the Queen of the Antilles.

According to R. A. Burnett, in Gleanings, the practice of extracting unripe buckwheat honey, notably by the so-called "lightning operators" of New York, in past years, has resulted in the demand for this erstwhile popular grade of goods being knocked out to a surprising extent among manufacturers. The man who takes honey from the hive in an unripe condition and places it on the market, is on a par with the fellow who runs the glucose mixing machine in the cellar. The bee industry has no enemy so malicious as these.

At the Ontario convention someone asked how to prevent moths from getting into the hives, to which Mr. Armstrong answered, "Keep strong colonies." In case Mr. F. L. Thompson should be troubled with moths, he will now know the remedy to apply. For the information of the general reader, it should be explained that to Mr. Thompson the stereotyped injunction, "Keep all strong colonies," appears about as sensible as would a command to always have a good honey flow.

Arthur C. Miller, in the Review, says, "Carniolans are the gentlest bees known." May be, some Carniolans are the gentlest bees known to Mr. Miller, but there are Carniolans and Carniolans, and none of them are the gentlest bees of which we know. The Caucasians are not only the gentlest but the laziest on record, according to the experience of this journal.

A letter from Dr. Blanton, July 12, advises that he had upon that date extracted twice, taking 5,500 pounds of honey, and hives were again full. Every comb is taken from the hives by the doctors' own hands. Concluding, Dr. Blanton writes : "In the fall I will write an article on the honey-gathering qualities of the different strains of bees. So far, the blacks are equal to any of them and more gentle. When possible, I shall eliminate every Cyprian from my apiary. " From an extensive experience with Cyprians, covering but a short period of time, we regard it as nothing short of a calamity to have the bees of any locality become contaminated with Cyprian blood, and we do not wonder at Dr. Blanton's desire to be rid of them.

The American Bee-Keeper desires to secure a correspondent in every state in the union and in every foreign country. We want some one who will be alert for bee-keeping items for publication, distribute sample copies, receive subscriptions, and act generally in the interests of this journal. If the reader is in a position to act as our representative, we should be pleased to enter into correspondence with him, or her, in regard to the matter.

In the treatment of paralysis with sulphur, where results have proven unsatisfactory, there is no doubt that the operator has departed to some extent from the rules governing the Poppleton system of treatment. Now is the time to look into the details of the matter, while the article is before the reader, and thus guard against future trouble.

Arthur C. Miller has pointed out that the notorious "umbilical cord" is but the last cast of the larva with its silken attachments, and necessarily common to all queens, thus spoiling a pretty theory. Mr. Miller's studious habits, relating to things apicultural, have been the cause of upsetting several cherished pet hobbies.

While the all-metal excluder has the advantage of a great number of openings through which the bees may pass, the wood-metal type is more rigid, and less inclined to sag, coming in contact with the top-bars of the frames and thus obstructing the openings.

Though there are occasionally exceptions, it rarely pays to rush the honey crop to market. Bee-keepers who are ready and willing to turn over their product to the dealer at less than it is worth, will always find buyers equally willing to accommodate them. After the crop is sold, however, it is too late to profit by a rising market.

Owing to the fact that the author desired to make some changes in the article relating to formalin gas as a cure for foul brood, we were unable to present it in this issue, although we had the manuscript in hand at the time we promised to give it this month. We hope to have the revised copy in time for our next issue.

At the time the Holyland bees were first imported into the United States some twenty-three years ago, it was thought that the popularity then acquired by the Italians, would necessarily be short-lived. As it now appears by the twenty-fifth anniversary of the landing of the Holylands, no one will recall that they ever landed.

It is occasionally observed of late, and probably not without some tenable ground, that good beeswax is yearly becoming scarcer. It is a fact that while honey prices have dropped heavily, the prices of beeswax have not changed perceptibly during the past twenty years.

"Set a bottle of beer, sugar and water beside each hive to catch wasps," commands the Irish Bee Journal. If McIntyre, Hetherington, Coggshall and a few other American bee-keepers were to adopt this sort of wasp trap, Milwaukee would take on a boom.

The drug journals of the country quote "strained honey" to the trade. So long as "extracted" is meant and understood, it probably makes no difference as to the term employed; however, few bee-keepers would care to take strained honey, even as medicine.

The old-fashioned glass box, holding 14 to 20 pounds of honey has so entirely disappeared that it is not improbable that a limited number of these would find ready sale in the home market, as a decided novelty.

The exercise of personal ingenuity and individual thought and judgment are more important in the management of an apiary than are journals and books. A combination of all these, however, enables the operator to reap the full benefits of the business.

To rid combs of moth-worms, close them up tight in hives or a box with one or two ounces of bisulphide of carbon exposed in an open dish. By repeating the application of carbon every ten days, combs may be kept indefinitely in any climate.

The old-fashioned fellow in the apiarian ranks of American beedom is characterized as a "box-hive man." In England they have a more elegant appellation for bee-keepers of this class. They are "skeppists" over there.

The season for bee hunting and disputing bee-tree rights will soon have arrived. Some important information bearing upon the subject, from the literature furnished its members by the National Association, will be found in this issue.

Room in the surplus apartments should be given very sparingly, and with good judgment, as the season draws to a clos̆e. Otherwise, unfinished section will result.

Speaking of nectar-yielding flowers, D. M. M., in Bee-Keepers' Record, says: "Over the whole world white clover is admittedly the best and most widespread."

Prof. T. W. Cowan, senior editor of the British Bee Journal and Bee-Keepers' Record, after a residence of five years in California has returned to England.

It is the number of working bees, not hives, in the apiary which governs the extent of the honey crop.

The heavy crop of honey anticipated in California this season has failed to materialize.

The reports of a full noney crop are few and far between this year.

In tropical countries it is better to keep hives under a roof.

PROPOSED AMENDMENTS TO THE CONSTITUTION OF THE NATIONAL BEE-KEEPERS' ASSOCIATION.

President's Office
National Bee-Keepers' Ass'n,
Flint, Michigan, June 27, 1903.

The following amendments to the constitution of the National Bee-Keepers' Association have been approved by a majority of the board of directors, and of the executive committee, but before laying them before the coming convention at Los Angeles, it is desired that all shall have an opportunity to criticise and suggest, hence their publication. Suggestions and criticisms may be sent to President Hutchinson, who will lay them before the committee having the matter in charge.

ARTICLE III.—Membership.

Section 1 to be amended to read as follows:

Sec. 1. Any person who is interested in bee culture, and in accord with the purpose and aim of this Association, may become a member by the payment of $1.00 annually to the general manager or secretary; and said membership shall expire at the end of one year from the time of said payment, except as provided in section 10 of Article V of this constitution. No member who is in arrears for dues, as shown by the books of the general manager, shall be eligible to any office in this association; if such disqualification occur during the term of any officer, the office shall at once become vacant.

Section 2 to be amended as follows:

Sec. 2. Whenever a local bee-keepers' association shall decide to unite with this Association as a body, it will be received upon payment by the local secretary of 50 cents per member per annum.

ARTICLE IV.—Officers.

Section 1 to be amended to read as follows:

Sec. 1. The officers of this association shall be a general manager, a president, a vice president, a secretary whose terms of office shall be for one year, and a board of twelve directors, whose term of office shall be four years, or until their successors shall shall be elected.

Section 3 to be amended to read as follows:

Sec. 3. The president, vice president, secretary and general manager shall be elected by ballot, during the month of December of each year, by a plurality vote of the members, and assume the duties of their respective offices on the first of January succeeding their election.

Section 4 to be amended to read as follows:

Sec. 4. The president, vice president, secretary and general manager shall constitute the executive committee.

Section 5 to be amended to read as follows:

Sec. 5. The directors to succeed the three whose term of office expires each year shall be elected by ballot during the month of December of each year by a plurality vote of the members. The three candidates receiving the greatest number of votes shall be elected and assume the duties of their office on the first of January succeeding their election. The board of directors shall prescribe how all votes of the members shall be taken, and said board may also prescribe equitable rules and regulations governing nominations for the several offices.

ARTICLE V.

Section 3, to be amended as follows:

Sec. 3. Secretary.—It shall be the duty of the secretary to keep a record of the proceedings of the annual meeting; to receive membership fees; give a receipt for the same, and turn all moneys received over to the treasurer of the Association, together with the names and postoffice addresses of those who become members; to make an annual report of all moneys received and paid over by him, which report shall be published with the annual report of the general manager; and to perform such other duties as may be required of him by the Association; and he shall receive such sum for his services as may be granted by the directors.

ARTICLE VII.—Vacancies.

Amend by adding the following clause to the end thereof: Any resignation of a member of the board of directors shall be tendered to the executive committee; any resignation of a member of the executive committee shall be tendered to the board of directors.

ARTICLE IX.—Amendments.

This constitution may be amended by a majority vote of all the members voting, providing such proposed amendment has been approved by a majority vote of the members present at the last annual meeting of the association, and copies of the proposed amendment, printed or written, shall have been mailed to each member at least forty-five days before the annual election.

PROPERTY IN BEES.

What the Courts Say in Relation to the Matter.

New York Common Law Reports.—Wendell, Vol. 12-16, Lawyers' Edition, p. 548.

Goff vs. Kilts.—Property in Bees—When Reclaimed—Trespass.

The owner of bees, which have been reclaimed, may bring an action of trespass against a person who cuts down a tree into which the bees have entered on the soil of another, destroys the bees and takes the honey.

Where bees take up their abode in a tree, they belong to the owner of the soil, if they are unreclaimed; but if they have been reclaimed, and their owner is able to identify his property, they do not belong to the owner of the soil, but to him who had the former possession, although he cannot enter upon the lands of the other to retake them without subjecting himself to an action of trespass.

Citations—2 Bl. Com., 393, 419; 2 Kent, Com., 394; 6 Johns., 5; 14 Jonhs., 406; 7 Johns., 16; 1 Cow., 243.

Error from the Madison C. P. Kiltz sued Goff in a justice's court in trespass for taking and destroying a swarm of bees, and the honey made by them. The swarm left the hive of the plaintiff, and flew off and went into a tree on the lands of the Lenox Iron Co. The plaintiff kept the bees in sight, followed them, and marked the tree into which they entered. Two months afterwards the tree was cut down, the bees killed, and the honey found in the tree taken by the defendant and others. The plaintiff recovered judgment, which was affirmed by the Madison C. P. The defendant sued out a writ of error.

Mr. S. Chapman, for plaintiff in error.

Mr. J. A. Seeber, for the defendant in error.

By the Court, Nelson S. Animals ferae naturae, when reclaimed by the art and power of man, are the subject of a qualified property; if they return to their natural liberty and wildness, without the animus revertend, it ceases. During the existence of the qualified property, it is under the protection of the law the same as any other property, and every invasion of it is redressed in the same manner. Bees are ferae naturae, but when hived and reclaimed, a person may have a qualified property in them by the law of nature, as well as the civil law. Occupation—that is, hiving or enclosing them—gives property in them. They are now a common species of property, and an article of trade, and the wildness of their nature by experience and practice has become essentially subjected to the art and power of man. An unreclaimed swarm, like all other animals, belongs to the first occupant—in other words, to the person who first hives them; but if a swarm fly from the hive of another, his qualified property continues so long as he can keep them in sight, and possess the power to pursue them. 2 Bl. Com., 393; 2 Kent. Com., 394.

The question here is not between the owner of the soil upon which the tree stood that included the swarm and the owner of the bees; as to him, the owner of the bees would not be able to regain his property,or the fruits of it without being guilty of trespass. But it by no means follows, from this predicament, that the right to the enjoyment of the property is lost; that the bees, therefore, become again ferae naturae, and belong to the first occupant. If a domestic or tame animal of one person should stray to the enclosure of another, the owner could not follow and retake it without being liable for a trespass. The absolute right of property, notwithstanding, would still continue in him. Of this there can be no doubt. So in respect to the qualified property in the bees. If it continued in the owner after they hived themselves, and abode in the hollow tree, as this qualified is under the same protection of law as if absolute, the like remedy existed in the case of an invasion of it. It cannot, I think, be doubted, that if the property in the swarm continues while in sight of the owner—in other words, while he can distinguish and identify it in the air—that it equally belongs to him if it settles upon a branch or in the trunk of a tree, and remains there under his observation and charge. If a stranger has no right to take a swarm in the former case, and of which there seems no question, he ought not to be permitted to take it in the latter, when it is more confined and within the control of the occupant.

It is said the owner of the soil is entitled to a tree and all within it. This may be true, so far as respects an unreclaimed swarm. While it remains there in that condition, it may like birds or other game (game laws out of the question), belong to 'the owner or occupant of the forest ratione soli. According to the law of nature, where prior occupancy alone gave right, the individual who first hived the swarm would be entitled to the property in it; but since the institution of civil society, and the regulation of the right of property by its positive laws, the forest as well as the cultivated field, belong exclusively to the owner, who has acquired a title to it under those laws. The natural right to the enjoyment or the sport of hunting and fowling, wherever ferae naturae, could be found, has given way, in the progress of society, to the establishment of rights of property better defined and of a more durable character. Hence, no one has a right to invade the enclosure of another for this purpose. He would be a trespasser, and as such liable for the game taken. An exception may exist in the case of noxious animals, destructive in their nature. Mr. J. Blackstone says, if a man starts game in another's private grounds, and kills it there, the property belongs to him in whose ground it is killed, the property arising ratione soli. (2 Bl. Com., 419). But if animals ferae naturae that have been reclaimed, and qualified property obtained in them, escape into the private grounds of another in a way that does not restore them to their natural condition, a different rule obviously applies. They are then not exposed to become the property of the first occupant. The right of the owner continues, and although he cannot pursue and take them without being liable for a trespass, still this difficulty should not operate as an abandonment of the animals to their former liberty. The rights of both parties should be regarded, and reconciled as far as is consistent with a reasonable protection of each. The cases of Heermance vs. Verney, 6 Johns., 5, and Blake vs. Jerome, 14 Id., 406, are authorities for saying, if any were wanted, that the inability of the owner of a personal chattel to retake it while on the premises of another, without committing trespass, does not impair his legal interest in the property. It only embarrasses the use or enjoyment of it. The owner of the soil, therefore, acquiring no right to the property in bees, the defendant below cannot protect himself by showing it out of the plaintiff in that way. It still continues in him, and draws after it the possession sufficient to maintain this action against a third person, who invades it by virtue of no other claim than that derived from the law of nature. This case is distinguishable from the cases of Gillet vs. Mason, 6 Johns., 16, and Ferguson vs. Miller, 1 Cow., 243. The first presented a question between the finder and a person interested in the soil; the other between two persons, each claiming as first finder. The plaintiff in the last case, although the first finder, had not acquired a qualified property in the swarm according to the law of prior occupancy. The defendant had. Besides, the swarm being unreclaimed from their natural liberty while in the tree, belonged to the owner of the soil ratione soli. For these reasons I am of opinion that the judgment of the court below should be affirmed.

Judgment affirmed.

Cited in 17 Barb., 565.

HONEY AND BEESWAX MARKET.

WASHINGTON GRADING RULES.

Fancy.—All sections to be well filled, combs straight, of even thickness and firmly attached to all four sides; both wood and comb unsoiled by travel stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy white," "No. 1, dark," etc.

Chicago, July 7.—There is little call for comb honey at present. Some new is offered, and for fancy 14 to 15 cents is asked. Extracted sells at 6 to 6½c, depending upon flavor, body and package.—R. A. Burnett & Co.

Kansas City, Mo., July 8.—Supply and demand for honey are both light at this date. We quote new white comb 15c. Extracted, 5½ to 7c. Good demand for beeswax with light supply. Good prospects for crop of comb honey; a little new now on the market; old crop cleared out.—Hamblin & Sappington.

Buffalo, June 8.—The demand for honey is exceedingly quiet, and prices must be cut. We quote strictly fancy comb, 15 cents. Other grades range from 7 to 13 cents. Extracted not wanted. Beeswax wanted at 25 to 33 cents.—Batterson & Co.

Cincinnati, June 1. — Very little change in market since last report. We quote amber extrade grades 5 1-2 to 6 1-2 cents in barrels. Clover, 8 to 9 cents. Supply equal to demand. Comb honey, 15 to 16 cents, for fancy. Beeswax, 30 cents.—The Fred W. Muth Co.

Cent=a=Word Column.

The rate is uniformly one cent for each word, each month; no advertisement however small will be accepted for less than twenty cents, and must be paid in advance. Count the words and remit with order accordingly.

WILL SELL half interest in my apiary, pineapple and orange plantation. Good apiarist will have exclusive charge. D. DALY, La Gloria, Cuba. 8-2t

WANTED—To exchange six-month trial subscription to The American Bee-Keeper for 20 cents in postage stamps. Address, Bee-Keeper, Falconer, N. Y.

AGENTS WANTED to sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Jamestown, N Y.

FOR SALE—A Hawkeye, Jr. Camera Complete. Uses both film and plates. Cost $8.00, will sell with leather case for $3.50 cash. Address Empire Washer Co., Falconer, N. Y.

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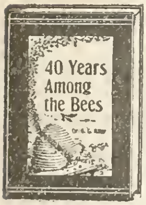

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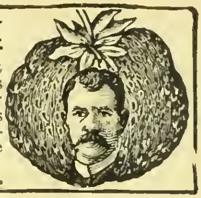

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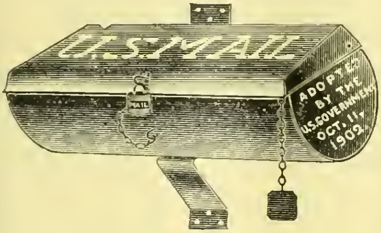

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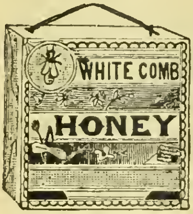

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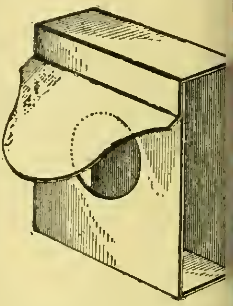

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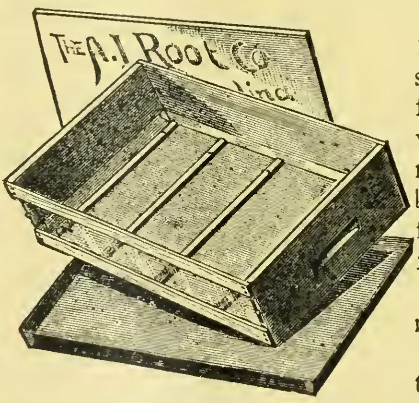
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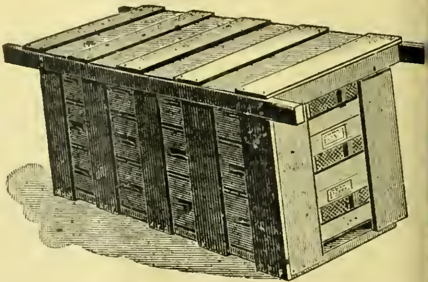

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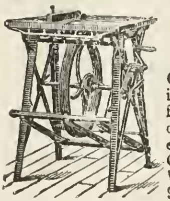

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THE AMERICAN BEE-KEEPER

Published Monthly by The W. T. Falconer Mfg. Co.

Vol. XIII SEPTEMBER, 1903 No. 9

WORK FOR SEPTEMBER.

Next Season's Honey Crop and Its Relation to Manipulations this Month.

(Arthur C. Miller.)

IT SEEMS but yesterday that bees were bringing in their first pollen of the season from tag alder, and yet today I am writing of winter preparation, though happily real winter is yet quite distant.

In few branches of husbandry is it more essential to be forehanded than in bee-keeping. To secure the greatest degree of success in each and every department of bee culture, it is necessary to lay the foundation months in advance. This is an old story but will bear repeating if the questions and reports that find their way into print are any criterion.

It at first glance seems foolish to expect to influence next spring's crop by any manipulation this September, and yet it is right now that we must establish the conditions which will make certain the securing of next season's harvest provided the flowers yield.

These conditions are big colonies, headed by young queens and supplied with a superabundance of good stores.

Mr. Dadant in Revised Langstroth, page 328, says: "Some 18 years ago in an apiary away from home where we were raising comb honey we had a number of swarms which in the rush of the honey crop we did not examine until their combs were built. At that time the triangular bar was the guide principally used and the combs of some of these swarms were joined together in a way that rendered the frames immovable. In the fall we extracted from the brood chamber of nearly every colony as was then our practice, leaving only seven Quinby frames on an average, for winter. The colonies that had crooked combs were left with all their stores—ten frames —(equal to 13 L frames. A. C. M.) because we could not disturb them without breaking combs and causing leakage and robbing, and it was not the proper season to transfer them." (Now note carefully the rest of the paragraph.) "These colonies did not have to be fed the following spring; became very strong, and yielded the largest crop. This untried-for result caused us to make further experiments which proved that there is a profit in leaving strong colonies a large quantity of honey so that they will not limit their spring breeding." And I would add that there is very little profit in wintering any but big colonies. What would some of the advocates of six or seven L frames for winter say to wintering on 13 L frames?. It is quite easy to say what are the necessary conditions, but it is not so easy to secure them.

First, eliminate all small colonies by combining them into a few good ones, or by using them to re-inforce those already in fair population.

Second, supply every colony with a young queen of the best stock in your yard. This matter would better have been better attended to early in August, though mid September is not too late.

Third, supply every colony with enough combs to contain all the stores the bees can possibly need before next season's "surplus flow," by which I mean to emphasize giving much more than enough to carry them merely to the time when they can get a bare living if the weather is favorable—which it often is not.

Fourth, giving sufficient stores to fill those combs and doing it at such a time as will enable the bees to properly prepare and place it, matters which the bees can accomplish far better than we.

Some localities enable the bees to supply their larder from natural sources early in August; others get their supply in September, and in other places the apiarist must either give combs that were filled early in the season or feed sugar syrup.

It has frequently been advised to delay feeding the bees as long as possible in the hope that they may secure more or less from fall flowers and so need less food. Simultaneously advice is given to add honey or acid to the syrup to prevent granulation, to feed the syrup as thick as possible and to feed quickly.

It will be found much better to, early in September, feed each colony all the food you think they will need and to give the food thin and be several days about it. But here is an important feature:—feed each colony all it can possibly take from the feeder in twenty-four hours, and by thus doing you will so supply every empty cell with thin syrup that there will be little chance for the queen to extend the brood nest even should she be so inclined. If the weather is warm the bees will have in another day, converted this syrup into thick and good food, i. e., will have "inverted" it. Such stores are virtually proof against granulation, and are ready for use at any time without the labor of digestion, a matter of much consequence in the early spring when the old bees' race is most run and young bees are still scarce.

As soon as the bees have got the first lot of syrup well disposed of, give them another dose. If the colonies are properly strong, three doses will be sufficient and may be given at intervals of twenty-four hours. If a heavy flow of nectar is now yielded by fall flowers let the bees pack every corner and then let them put the surplus in extracting supers.

This sounds like doing things back end first, I know, but I have proved it to be the safest and most profitable way, for the fall crop is so often a failure.

The fifth item, and an important one, is to make your final inspection of the bees as early as you can (here seldom later than September 25th) and let the bees seal all tight to remain undisturbed and unopened until next spring.

Providence, R. I., Aug. 6, 1903.

GLEANED FROM THE FRENCH.

Interesting Topics Selected and Commented on by Our Staff Reviewer.

(Adrian Getaz.)

FOUL BROOD.

MR. L. DELAY (Revue Internationale) gives an account of how he cured foul brood not only in his own apiary but in several others of the neighborhood.

He fed the essence of eucalyptus, mixing one part of it with ten parts of alcohol, and putting a teaspoonful of the mixture in every quart of syrup fed. Every time the hive is opened a few drops of pure essence are put in on the bottom or elsewhere so as to get the benefit of the evaporation of it. The vapors will penetrate everywhere in the hive.

An essential point is to remove all the honey. As long as there is infected honey the malady will reappear whenever the bees use it.

In reading the above it ocurred to me that the cause of failure, when using drugs to cure foul brood, may have been the neglect of the above precaution.

In the course of his experiments he met some failures even then. It occurred to him that the pollen might be infected also. And sure enough, after the combs of pollen were removed the colonies were easily cured.

To be fully satisfied he put two of these combs of pollen in a healthy colony and had the satisfaction (?) of seeing them contract the disease. He did not experiment any further in that direction.

One advantage in using eucalyptus essence is that the bees take it readily, in fact are so fond of it that unless the apiarist be careful robbing would easily be started.

THE UNCAPPING FORK

The fork is said, in the Revue Internationale, to be superior to the knife for uncapping combs. It is difficult to describe it without figures, but an idea may be had by representing an ordinary table fork about five inches wide, having twenty very sharp teeth about three inches long. The part back of the teeth is about three inches by five, curved upward. The handle occupies about the same position as it does in an ordinary table fork. The instrument is pushed under the cappings. These are thus separated from the comb but remain attached together like a sheet. That sheet rolls over itself on the curved part of the fork while it is pushed under.

ROBBING,

A case is reported by Mr. Duclos where, curiously enough, one of his colonies was robbed by the bees of another apiary. None of his colonies took part in the proceedings. After vainly trying to stop the trouble he finally closed the hive, shutting in as many robbers as possible. He then arranged so they could not smother and left them closed in eight days. After the hive was opened the robbers remained permanently with that colony and never attempted further pillage.

WATER IN EARLY SPRING.

Some time ago I mentioned the invention of an apparatus preventing bees from going out when the weather is yet too cold in the spring, and yet permitting them to come out of the hive proper and have the benefit of the fresh air if they need it. To the large ante-chamber in wire cloth a water feeder is added by the inventor, Mr. Preus.

One of the first facts ascertained by using the apparatus is that in the early spring the bees need an enormous quantity of water to dilute the pollen and the old thick honey in order to prepare the food for the brood. Mr. Eck (Rucher belge) estimates that a strong colony needs about a pint of water every day. Some of the writers seem now to think that giving the water without confining the bees would be sufficient; that it is the absolute need of water that compels the bees to go out in bad weather.

STIMULATIVE FEEDING.

Mr. Gerstung, the editor of the Deutsche Bienenzucht, asked his contributors to give him their opinions on stimulative feeding early in the spring.

About half are in favor of it, the others decidedly object. Among those who practice it, half feed diluted honey. Two feed sugar, provided there is yet some honey in the hive. Only one feeds sugar unconditionally. Quite a number add to the honey some flour or milk, or some other substance taking the place of pollen.

It must be remembered that in Germany bees are wintered generally out of doors and brood rearing begins early. I have for some time suspected that often the lack of pollen prevents the strong colonies from raising brood to their full capacity, and undoubtedly flour, milk or something similar added to the stimulative food would be beneficial.

Feeding flour outside is often useless on account of adverse weather, and often the bees come out after the flour when the weather is too cold and a number of them are chilled.

So the idea of furnishing a substitute for pollen in the honey or syrup fed is not out of place. The longer one keeps bees the more he is convinced of the importance of early and active brood rearing

Knoxville, Tenn., Aug. 8, 1903.

WIRING FOUNDATION.

(E. F. Atwater.)

SOME time ago I wrote of the plan of using but two horizontal wires to the L frame as practiced by Coggshall, Harry Howe and others. For years I had tested various plans of wiring—two, three or four horizontal wires to the frame, as well as several of the diagonal or crisscross methods. Finally I settled on two horizontal wires as the most satisfactory, considering the saving in time and labor of wiring and embedding, more than half, over the other plans.

My frames of foundation are often hauled several miles, over rough roads, which caused many sheets to break lose from the wires, when embedded with spur or rocker. So I settled on the plan of not embedding the wire at all, which was better, but certainly very far from perfect, as occasional sheets broke loose from the top bars of the frames, while en route to the out yards. So at last I have found a plan which is more satisfactory than any other.

The wire is embedded with spur or other tool (I prefer the rocker) then a camel's hair brush, dipped in melted wax is quickly run over the wire lengthwise, which securely waxes the wire in place, and so strengthens the sheet of foundation that there is no breaking or sagging at the wires, and as the wires help to support the weight of the sheet there is no trouble from the foundation breaking loose along the top bar.

We are now using a similar plan, which is even more rapid. The Onderdonk wax spoon, with a small slit in the end of the bowl or sharp-pointed tin trough is filled with melted wax, the slot fitted over the wire and drawn rapidly across and downward, which securely waxes the wire to the foundation. The sheet of foundation is, of course, supported by a board about one-half the thickness of the frame, until the wire is embedded.

SECTIONAL HIVES.

The shallow, sectional hive surely fills the bill here. The young man who is assisting in our apiaries was at first opposed to the divisible hives, but now he likes them, as no fool (or wise man either) could fail to notice the saving in labor in nearly all manipulations. And contrary to the experience (?) of Gill, Doolittle and Dadant, my queens show no reluctance in passing from case to case, nor do the queens dislike to lay near the thin top and bottom bars of the frames.

Any fair-minded person inspecting our colonies, of which over one hundred are in the shallow hives, would readily admit that the shallow hives contained colonies fully as strong as any on L frames. For extracting, the shallow extracting super, containing either eight or ten frames 5 3-8 inches deep, top bars only 7-8 inch wide, Hoffman end-bars, securely nailed, makes a splendid hive, and we are beginning to think superior to the regular Heddon hive, which contains closed-end standing frames, which cannot be manipulated nearly so rapidly or roughly as the shallow Hoffman frame. This conclusion has been reached after a trial of hundreds of cases built on the regular Heddon principle for several seasons. I have found no advantage in closed-end frames for early brood-rearing, and the development of strong colonies. They give trouble by shrinking and swelling and cannot readily be used seven in an eight-frame super, or eight in a ten-frame super, for extracting purposes; while the shallow Hoffman frame is readily so used.

We give our colonies unlimited breeding room in spring, and as the flow opens pile on the supers, when as a general rule we do not see them again until extracting the first crop, and again to extract the second crop. These shallow supers are freed of bees by the Coggshall method of flapping the quilt and smoking; the operation takes but little more time to remove a whole super than to shake and brush a single heavy L frame. We hope to try Rambler's "jouncer" this season.

Boise, Idaho, June 18, 1903.

CUBAN HONEY IN PHILADELPHIA.

(M. F. Reeve).

CONSIDERABLE Cuban comb honey, or what was represented to be such, has been exposed for sale in the windows of the principal Philadelphia grocery stores during the spring and summer. It was in tall sections, some of it being glazed, and was put up in attractive style. It found ready sale, I was told, at 20 cents a pound. It was of a light amber color and of very pleasant flavor. It would have to be a good article to compete in the Philadelphia market, where the palates of consumers have been familiar for many years with white clover honey. Much honey of this kind comes there from New York State. There was formerly a big yield around Philadelphia, but honey producers say the lawn mower has killed off the white clover so that in many sections around the suburbs where delicious nectar was gathered every year by bees, none is produced any more.

Philadelphia has migratory bee-keepers as well as Florida. But her emigrants only start out in the fall. There are still vast regions of open country along the Delaware and Schuylkill rivers where wild flowers grow luxuriously in the early spring and fall. Acres and acres of golden-rod, wild aster, heartsease and smartweed invite the honey-bee to come and sip up this nectar.

The wandering bee-keeper who generally has a stand of bees in the suburbs loads his colonies and an extractor into a wagon when the fall flow begins and camps out in the lots along the river banks, where he starts operations. Some seasons he reaps a goodly profit from this free source.

Rutledge, Pa., Aug. 10, 1903.

IMPROVEMENT OF STOCK.

A New Idea as to Means of Facilitating this Desirable Result

(G. B. Crum.)

I HAVE no queens for sale, so don't think this article a free advertisement to increase our trade. What I have to say is paid for by the editor, so you will see that I have no personal interests to advance.

Our celebrated queen-breeders tell us that they breed up quality by selection, etc. I am not going to tell you anything about patent cell-cups nor argue for the merits of any particular system, but simply state my own method of queen rearing.

I have combs built part way down and give these to queenless colonies to start dummy cells on lower edge, which I use by putting in larvae, changing them again in from 12 to 20 hours; that is, taking out those first inserted and substituting a new batch. "Oh, that's nothing new," you say. Now hold your tongue and wait until I am through.

My cell-building colonies are broodless—composed of bees not one of which is under ten days old. You say, "Why go contrary to all orthodox rules?" Because young bees like "pap" better than old ones. To satisfy yourself upon this point, just give a frame of eggs to a colony with no bees under ten days old and another to a colony which has just been deprived of all brood and eggs. You will find that the former are much better fed than the latter.

Now for my plan of selecting queen mothers: I select a queen that has just begun laying, regardless of what she may prove afterwards, as to color, etc. I closely follow up this method from generation to generation, from April to October. Thus, it will be seen, it is possible to get ten generations in one year—forty generations in four years—which is about the extreme limit of a queen's life, which is used as a drone mother. Now observe that it is thus possible for a queen to be a half-sister to her fortieth grandmother. You inquire, "Well, what do you gain by all this?" Well, I gain a long stride ahead of Nature, and, I believe, a queen whose workers have few equals and no superiors.

I am willing to back up my claims by having any one of my queens tested by the editor of any of our bee journals, in 1904, and in case of my failure to prove my claim, will forfeit $2.00 and the queen against any competitor. If any one wants to test it, "holler." Don't be afraid of hurting my feelings.

Pearson, Ga., July 29, 1903.

Producing Comb and Extracted Honey in the Same Hive.

(W. W. McNeal.)

I HAVE again demonstrated to my entire satisfaction the practicability of working a colony for both comb and extracted honey.

I insist that no colony of bees will do its best at honey-gathering till there is comb being built in the hive. That is such a potent inspiration to them that beekeepers cannot well afford to ignore it. There is no prettier way of raising "chunk" honey than by alternating frames of comb with those containing only starters. I prefer frames with starters to full sheets of Fdn., because it is more profitable. I want the bees to use their own wax, and besides they manifest more enthusiasm in the construction of wholly natural comb. Full sheets of foundation in large frames will often warp resulting in an ill-shaped comb unless it is wired; and if the frames were wired the wire would be somewhat of a nuisance when cutting out the honey.

The first combs built with this manifestation will not be as white as that later on when the bees get fairly down to their work. They will snip wax from the old combs adjoining and work it into new ones. To avoid having any second grade chunk honey I lift the empty frames from the supers and note the color of the comb when the frame is about one-half full or a little more. If it is very dark I take the frame or frames to the extracting room, throw out the honey and cut the comb back to only a starter. These scraps of comb are all saved and rendered into wax. By the time the bees get well at work in the empty frames again the old combs are pretty largely filled with honey and there will be little or no borrowing of wax.

I have had as white combs built in this way as any one would want, and by reason of the greater activity of the colony I always felt that honey thus obtained was very much like finding a piece of money.

The production of "chunk" honey is, in my opinion, just as profitable in many cases as section honey, if not more so. The artist producer of honey has not devoted as much time in educating the consumer as he has in perfecting the commodity of the goods he offers for sale. Consequently his highest attainments are not appreciated by the city folk whose trade he seeks to catch, but is made to lend color to the many-winged reports that comb honey is largely manufactured. Just so long as these conditions prevail, the dealer in honey will, to a very great extent, be the receiver for doubt and insinuations. Chunk honey appeals to the people in general because it is on a par with their education in things agricultural. It excites both the admiration and the appetite of the lover of honey, and when he has sampled it he is willing to concede the fact that it is "real bees' honey." No bee-keeper who values his reputation for honesty and a love of right doing will seek to work off inferior honey by covering it up with a better grade. When I speak of chunk honey, I don't mean all sorts. I mean a strictly first-class article, cut into neat blocks and placed with care in a suitable vessel for retailing. If wrapped in a good quality of butter paper the honey is very presentable indeed, and will readily sell in any market. Try it, brother bee-keepers, and see if you don't find a good market at home for much of your honey which, if put up in section-boxes, would go to the cities to depress the markets and lower our wages.

Wheelersburg, O., July 20, 1903.

THE
Bee-Keeping World

GERMANY.

DR. DZIERZON relates in an article in Bienen-Vater "The Golden Art of Obtaining Largest Honey Yields," the following:

"Having purchased four colonies of bees at an auction during the beginning of my bee-keeping career, in 1836, an examination of my purchased property showed a marked difference in the colonies. Three were very strong, each covering the whole comb area; but neither had more honey than needed for winter stores, while the fourth had a large surplus of honey, but was weak in bees. To ascertain the cause of this difference I carefully examined colony number four and found the queen slightly defective in her front legs. It seemed difficult for her to leave one comb and go to the next one. She had confined herself to just one comb, leaving all the rest for store room. The combs of the other three colonies had been kept full of brood, consequently no honey could be stored.

It follows from this experience that the essentials to great honey yields are: plenty of empty comb and contraction of the brood nest."

Dr. Dzierzon is not far out of the way, and we can endorse every word so far; but he continues, and that seems the singular part of his writing: "The operations of enlarging and contracting both brood chamber and store room are impossible with any other style of hive but my twin hive as far as I know. Any one desirous to obtain these large yields can only accomplish this by adopting it."

Dr. Dzierzon's twin hive is a one-story hive, open from the rear. The frames are narrow (23 1-2 centimeters), and sixteen of these are used, and it is claimed a queen will not occupy very many narrow frames, thus leaving most of them for storing honey. Dr. Dzierzon is opposed to the use of queen-excluding metal, and he accomplishes the desired result by inserting combs containing pollen, such as have very deep cells.

From the Bienenphlege: A German tavern-keeper, witness at a honey adulteration suit, was asked by the court for the reason why he persistently kept adulterated honey on the table for his guests. His answer was: "Of the pure article they eat so much; of mixed stuff they soon get enough."

H. Gravenhorst says, in Ill. Bztg., that heavy thunderstorms prevent buckwheat from yielding honey.

R. Spiegler had an unpleasant experience with a very vicious swarm of bees. After treating it with chloroform he had no further trouble with it, and it worked well the next day and thereafter.

Bee-keeper Herrel, of Heidelberg, has hit on a plan, possibly of value, especially to those who keep black bees which will make the finding of queen bees easier. With a quick-drying adhesive paint he painted the thorax on the back of his queens a bright yellow. This did not prove detrimental to the queen's welfare. He keeps the queens confined in a cage among the combs of her colony for an hour until the paint is thoroughly dry.

It has been claimed, even by some American writers that Dickel and the Dickel theory is being totally ignored in Germany by bee-keepers and the scientific men. This does not seem to be so, as different scientific publications continue to publish Dickel's writings as they relate to the physiology of the honey bee. Mr. Dickel speaks in "Die Biene" of an experiment almost any bee-keeper may make, and which throws light upon the disputed questions. The experiment is as follows: Late in the fall, when there is still a very little open brood in the hives, remove the queen from one of the colonies—the bees will proceed to rear a queen which usually will not become fertile—and when she begins to lay eggs the following spring only drones will be the result. Allow the colony to go on in this fashion till normal colonies begin the rearing of drones. Secure a small piece of drone comb containing young larvae, which latter should be carefully removed and then replaced with very young working larvae. When this is done fit the little piece of comb into a comb free from any brood and give it to the colony before mentioned; first, however, removing all brood and the queen. After an elapse of eight days an examination will show that, although there be less sealed cells than larvae were transferred, yet there will be found capped queen-cells, capped drone-brood and capped worker brood, all reared from worker-larvae. The experiment proves that bees, no matter how old they may be, are able to rear brood.

The heath honey is largely produced in the province Hanover. It is probbly the thickest or heaviest of any honey produced. It cannot be extracted; to obtain it the combs have to be destroyed or mashed and the honey pressed out. Sometimes artificial heat is applied when thus treated, but the honey obtained without it, or by the cold process, is of better quality and brings better price.

ITALY.

Dr. Alessandro shows in Apicoltore that during the middle age bees were frequently used as a means of defense.

In a manuscript of 1326, he says, a machine is described and pictured which was used for the purpose of throwing skeps of bees into the forces of the enemy, and even during our times bees have been used in war times as in the war between Prussia and Denmark, 1864, and Austria and Prussia in 1866.

FRANCE.

An international bee-keepers' exhibition is planned by the French. It is going to be held in Paris during 1904.

A new ordinance has been passed for Algiers, which will be a hard blow to the industry of bee-keeping, viz: "An apiary must not be located any nearer to a neighbor than 200 meters."

SWITZERLAND.

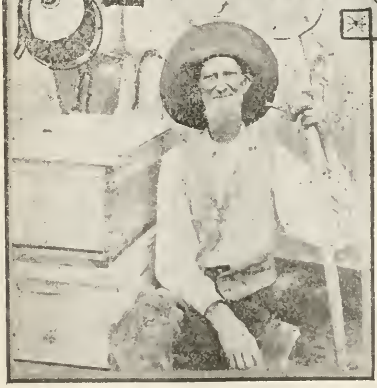
By popular vote the new tariff on honey has become a law. Accordingly the import duty on honey is now 50 francs instead of 15, as heretofore. This will hit Austrian bee-keepers particularly, who have largely exported to Switzerland under the low tariff.—Bienen-Vater.

PALESTINE.

It is doubtful whether the honey John the Baptist ate in the wilderness was genuine honey or not. Even at those remote times adulteration (?) was practiced. Even up to this time a syrup is made in many sections of Palestine from the juices of the grape and passed out under the name of honey. It is said that at the present time 200,000 pounds of this product are yearly exported to Egypt alone. The Arabs give this product the name "Disb", which is the same word as used in the original of the Bible and translated by the writers into "honey." There is also another product obtained in the Holy Land, called "wild honey" in the Bible. It is a sort of honey-dew which drips from the leaves of the fig trees and palms at times. This honey serves as an article of food; insects and humans both are eager for it. Genuine honey is, of course, also plentiful. It is probable that at the times of John the Baptist the woods and caves were full of bees, and bee-keeping was not carried on or had not to be carried on as an industry.—From Leipz. Bztg. L. Greiner.

The Seasoning Series

By Deacon Hardscrabble



Dear Bro. Hill:

I note by the papers that many of the boys are still, though not silently, keeping bees. The silent ones are letting the bees keep them. That's me exactly. And what a mighty difference, b'gosh! I've in mind two boys of of Weisnichtwo-fon—them as don't know where that is, I'll call it Blarney Center. One is red, rotund and rabid, and t'other is long, lean and laconic. One started keeping bees years ago, and as 'twas too much work to originate, he "borrowed" everything in sight, and soon as 'twas sort of forgotten he "discovered" it ("got 'em first," too, b'gosh). Durned remarkable man. Always prayin' for the Lord's guidance, but keeps a powerful good hold on the devil's tail. Believes in a bird in the hand, you know. But he is still keeping bees—noisily.

Then there's t'other chap—the laconic, lanky one. Talks little, but what he says goes. Don't do no prayin'; "Ain't got time," but lives by the Golden Rule right up to the limit. Wal, he started in the bee line long arter t'other chap. Didn't go to keepin' bees—not much—just took 'em out of another feller's way and set 'em to keepin' him.

Didn't waste no wind or ink on what he learned by experience, (and never "borrowed") cause that warn't his way. He just kept a layin' out new jobs for the bees and kept them hustlin'. They in turn kept him joggin' along like he was a-comin' down the home stretch. Oh, he can keep a pace, but like most busy men, has time for play and to drop us a grain of wisdom now and again. It's all his, too; no pirating in his copy. You know 'em both.

Well, there's a powerful good moral in this true tale, and it's this: While the Corpulent Pirate is gettin' some cheap notoriety (and a tin halo from some interested mercenaries) together with a few dirty shekels and a free pass to El Valle del Inferno—the real thing; not Dr. Pon's kind—the Lanky Silent One is a pilin' up of golden treasure both here and "up yonder." That's half the moral. T'other half is: Live right first and your glory'll come as fast as you can stand it, and then give up keepin' bees and let the bees keep you.

For them as ain't got room tell 'em to go find it as the Lanky One did. This is a tidy bit of a country, but if 'tis not big enough overflow into Cuba, as did Pat and the Lanky One. There'll be room enough; the Corpulent One will never crowd—except on paper—that kind don't.

"Them as has gits"—that is to say, them as has the energy to hustle and do with brains as well as brawn and do it on the square, gits all that's worth havin'. Them as can't grasp this is the kind of the Corpulent One with the Tin Halo.

What bee men need is more bees—to keep them—if you doubt ask Bro. Hutchinson. But there's one powerful bad thing 'bout him; he's nigh a generation too soon. D'ye see the hands a stretchin' out a-tryin' to pull him back? They have eyes, but they never see a durned thing. How do I know? Wal, I'm a lettin' of the bees keep me and I have time to amuse myself by a-lookin' at other folks.

Harry, if ye feel a tuggin' at your back straps jest grin that smile of yours and feel happy, 'cause you're ahead of the "push."

Nice little word that, "push;" makes little folks think they's It when they is really the dirt in the bearin's a-cloggin the whole machine. Don t hanker to be one of the "push;" they are all of the "graft.'

Tell the younger boys to "do things;" them as live most lives longest, and happiest too, b'gosh.

And the deacon ought to know, hadn't he?

When I'm gone, Harry, you can tell the boys of some of my journeyings.

Tell the boys to let the bees keep them. Yours as ever,

John Hardscrabble.

Hamilton County Bee-Keepers' Association.

We are in receipt of a copy of the Constitution and By-Laws of the Hamilton County (Ohio) Bee-Keepers' Association, of which William J. Gilliland, Silverton, Ohio, is secretary. The pamphlet contains also a concise chapter on foul brood, together with specific instructions for its cure by the world-renowned McEvoy system, the most universally successful in the treatment of the malady that has yet been given to the public. Every bee-keeper, great or small, should, if not in self-interest, for the protection of the industry, become conversant with the symptoms of the disease, so as to readily recognize and stay its ravages immediately upon its appearance. We, therefore, have made space in this number of The Bee-Keeper for a reproduction of the observations of the new assocition, compiled under the direction of the executive committee, and recommended to the fraternity, as follows:

FOUL BROOD.

Foul brood is a disease of bees common in all parts of the State of Ohio, and one which is fast ruining a most pleasant and profitable industry. It spreads through an apiary, affecting the strongest as well as the weakest colonies, because it is one of those malignant and contagious diseases due to the presense of a germ called by the scientists bacillus alvei. Adult bees are spposed to be beyond the reach of this germ, and the disease is therefore confined to larvae between the ages of one and ten days. Just how this young larva becomes affected is not definitely known. It may be through contagion from the diseased comb or brood which contagion is brought to the young larvae by the nurse bees, but in all probability the germ is introduced with the food. It has been said that foul brood develops from chilled or starved brood. This has been proven beyond a doubt not to be true. Since it is a germ disease it cannot develop when the germ which causes it is not present. On the other hand, the disease is so highly infectious that one drop of infected honey may ruin a whole apiary.

SYMPTOMS.

The first apparent evidence of the presence of the disease manifests itself in the behavior of the bees,which do not seem to possess their usual activity, but have a lazy, indolent manner. There is apt to be some litter in the entrance of the hive as though the bees were loath to "clean house." A few bees may fall at the entrance. After the disease is well advanced a foul smell resembling melting glue may be detected without removing the cover, even, and at some little distance from the hive.

On removing the cover an examination of an infected colony reveals the following peculiarities: The brood is not compact, but scattered. The empty cells, those not containing brood, may contain a dry scale in the bottom. The cappings over the dead larvae are depressed slightly and darker than the healthy ones. There is often a hole in the center of the cap. Many larvae, however, die before the cell is sealed.

If the examintion is made when the disease is just beginning, the affected larvae are no longer curled up, but either lie extended in the cell or are moving about unnaturally. As the disease progresses they lose their plump appearance, become flabby and finally die.

As decomposition begins the larvae at first take on a yellowish appearance, and later turn brown. If a toothpick is inserted into the dead larvae at this time and later and is slowly drawn out it will show a long, ropy, tenacious string, which upon breaking, when drawn out to its fullest extent, flies back into the cell. This ropy, putrid mass slowly dries down and adheres to the bottom of the cell, forming a small scale. The bees seem reluctant to remove these dead larvae, instead of hastening their removal as they do in other instances when larvae die. Or it may be that the dead larvae adhere so firmly to the cell that it is impossible for the bees to remove them. Whatever the cause may be, when the larvae are killed by this disease they are not removed.

As a result of the disease the colony becomes weakened since the brood fails to hatch, and soon dwindles down to such an extent that it is utterly defenseless and is then liable to be robbed. As soon as the robbing begins the disease is transferred to other colonies, and unless the bee-keeper is watchful the whole apiary becomes infected.

AN EMINENT AUTHORITY.

Dr. Howard says: "I regard the use of any and all drugs in the treatment of foul brood as a useless waste of time and material, wholly ineffectual, inviting ruin and total loss of bees. Any method which has not for its object the entire removal of all infectious material beyond the reach of bees and brood will prove detrimental and destructive and surefy encourage the recurrence of the disease."

The one method that has given the most universal satisfaction is recommended by Canada's inspector of apiaries, William McEvoy. His method is given below in his own words.

M'EVOY'S TREATMENT.

"In the honey season, when the bees are gathering freely, remove the combs in the evening, and shake the bees into their own hives; give them frames with comb foundation starters and let them build comb for four days. The bees will make the starters into comb during the four days and store the diseased honey in them, which they took with them from the old comb. Then in the evening of the fourth day take out the new combs and give them comb foundations to work out, and then the cure will be complete. By this method of treatment all the diseased honey is removed from the bees before the full sheets of foundation are worked out. All the old foul brood combs must be burned or made into wax after they are removed from the hives, and all the new combs made out of the starters during the four days must be buried or made into wax, on account of the diseased honey that would be stored in them. All the curing or treating of diseased colonies should be done in the evening, so as not to have any robbing done or cause any of the bees from the diseased colonies to mix and go with bees of sound colonies. By doing all the work in the evening it gives the bees a chance to settle down nicely before morning and then there is no confusion or trouble. This same method of curing colonies of foul brood can be carried on at any time from May to October when the bees are not getting any honey by feeding plenty of sugar syrup in the evenings to take the place of honey flow. It will start the bees robbing and spread the disease to work with foul brood colonies in warm days when the bees are not gathering honey, and for that reason all work must be done in the evening, when no bees are flying. When the diseased colonies are weak in bees, put the bees of two, three or four colonies together, so as to get a good sized swarm to start the cure with, as it does not pay to spend time fussing with little weak colonies.

"When the bees are not gathering honey, any apiary can be cured of foul brood by removing the diseased combs in the evening, and giving the bees frames with comb foundation starters on. Then also in the evening feed the bees plenty of sugar syrup, and they will draw out the foundation and store the diseased honey which they took with them from the old combs; in the fourth evening remove the new combs made out of the starters and give the bees full sheets of comb foundation and feed plenty of sugar syrup each evening until every colony is in first-class order. Make the syrup out of granulated sugar and put one pound of water to every two pounds of sugar and then bring it to a boil. As previously stated, all the old combs must be burned or made into wax when removed from the hive, and so must all the new combs made during the four days. No colony is cured of foul brood by the use of any drug. All the old combs must be removed from every diseased colony and the hive got away from the bees before the brood rearing is commenced in the new clean combs."

N. E. France, inspector of apiaries of Wisconsin, says: "All the difference from the McEvoy treatment that I practice, I dig a deep pit on level ground near diseased apiary, and after getting a fire in the pit, such diseased combs, frames, etc., as are to be burned, are burned in this pit in the evening and the fresh earth from the pit returned to cover all from sight. If diseased combs with honey in are burned on the surface of soil there is great danger the melted honey will run on the soil and in the morning the robber bees will be busy taking home the diseased honey.

"Also I cage the queen while the bees are on the six or eight strips of comb foundation, to prevent any swarming or deserting."

The equipment necessary for the McEvoy treatment is a large canvas or sheet, a broad pail partly filled with the corrosive sublimate solution, a sponge or rag, a bee brush similar to a Coggshall, a screw driver, or some other tool for prying the frame loose, and a set of frames containing only starters of foundation. The only time of the day suited to the treatment is toward evening, when the bees have ceased flying to and from the fields.

A bright moonlight night answers the purpose if colonies are to be treated, though the bees are perhaps more easily handled just at dusk than in the moonlight. At this time we have little to fear from robbers or from infected bees flying to healthy colonies.

The method of procedure is about as follows:

Spread the canvas over the old stand place the hive on the canvas. Gently shake the bees of the old combs into the hive, and brush all the bees of the old combs into the hive body. Remove the hive from the canvas, which should be gathered up by the corners in order to allow the bees to be shaken from it into the hive; then add the frames of foundation starters. Be sure that every bee is secured and placed in the hive, for a single escaping bee might fly to a neighboring hive and infect the colony.

During the whole operation care must be exercised to prevent robbing. Before the work is done, all scattering drops of honey must be removed by washing with the corrosive sublimate and all bits of comb must be picked up. Never let one drop of honey get away to infect other colonies.

When you have a set of combs partly full of honey, it seems a sin to destroy them, but unless you have upwards of ten colonies to treat, it will not pay to try to save an ounce of honey or wax. If you are a careful person you may make the combs into wax, and the honey may be saved by adding a little water and keeping it at the poiling point for two hours.

The old hive bodies may be scraped, the scrapings burned, and the inside painted with kerosene and set on fire. When it gets to burning well, throw in about two tablespoonfuls of water and and clap on the cover. The water will be turned to steam and this will scald the inside of the hive.

If this operation be performed with sufficient care, the colony will be free from the disease, but it will require close attention and the best of care because of the tender condition in which the bees will be after the severe treatment, and the discouragement following the loss of all their brood. This treatment may be used at any time during the summer but preferably when honey is coming, as the danger from robbing is then at a minimum.

There are doubtless many instances where a mild case of foul brood is taken for chilled brood, and it is possible that a case of foul brood may appear in a mild form early in the spring, and then disappear as the summer opens, only to reappear later in the season. It is possible that this state of things is due to the fact that the honey in the cells is infected with the germs, and when the spring honey begins to come in freely, it is used to feed the brood, which spring honey being free from germs, is eaten by the brood with impunity until the combs become full of healthy brood and the dead larvae nearly disappear.

Perhaps the favorable condition for the spread of the disease occurs when it becomes present in the yard of the bee-keeper who does not examine his colonies frequently. A colony becomes weakened from the failure of the brood to mature and the keeper may not know that anything is wrong with the colony. Soon the honey flow stops and robbing commences. Weak colonies are attacked first and in this way honey from this weak, diseased colony is taken to nearly every hive in the yard and especially to the stronger ones with disastrous results.

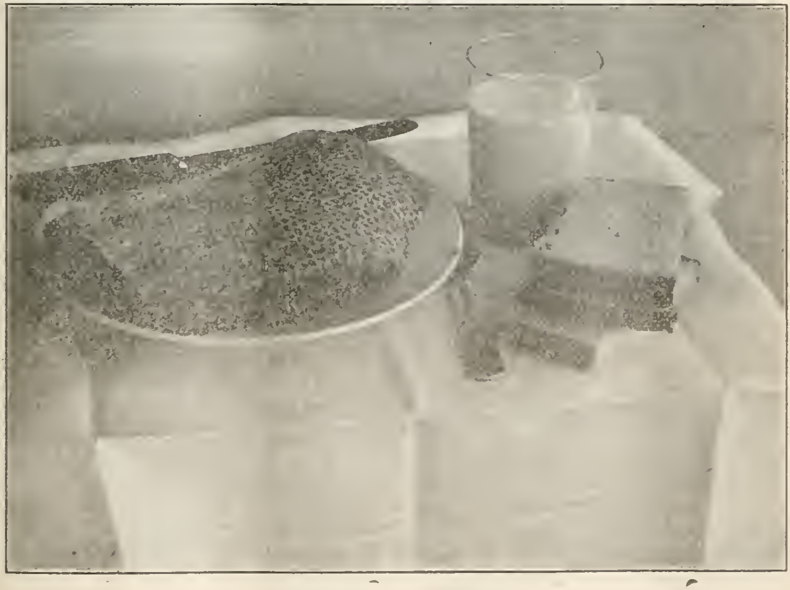
The extractor is an important factor in spreading the disease. A case of extracted combs, taken from a diseased colony, and after extraction put back into half a dozen different hives, may bring infection to each of them.

Another way in which the apiary may become infected is by the carelessness of the owner. Combs, partly filled with honey or brood are left lying on the top of the hive "for the bees to clean up." The waste from the wax extractor is thrown out where the bees can have access to it. A hive in which the colony has died is not at once taken out of the reach of the bees, but allowed to stand in the yard and the entrance of the bees not fully prevented. This is wrong. Even if there were no danger from disease, the hive should be closed as soon as the colony is dead, and the refuse from the wax extractor burned, never leaving it where the bees can get at it. such carelessness encourages robbing and is an important factor in the spread of the disease. The extractor need not be discarded nor the practice of celler wintering, but every bee-keeper should make himself acquainted with the disease, keep a vigilant watch, and stamp it out as soon as it appears. To leave one diseased colony in an apiary may mean the total ruin of all the other colonies. Even one drop of infected honey, if left where the bees have access to it, may mean the infection of the whole apiary. The owner must then take extreme precautions to prevent the spread of the disease. He must take the trouble of washing his hands, and whatever tools he uses, in an antiseptic containing three per cent. solution of carbolic acid, which would be about four teaspoonfuls to a gallon of water. Or a solution of corrosive sublimate, using one-eight ounce of the drug to one gallon of water. Right here it should be remembered that corrosive sublimate is a deadly poison, and one that must be handled with great caution. A very small amount spilled on the honey or comb intended for use will convert it into a violent poison. The disease may be transmitted to a healthy stock simply by the operator handling the frames of the healthy one after he has been examining a diseased colony. It is impossible to be too careful. For the man who does not wish to take the above precautions, the best method of procedure for him to rid his apiary of the disease is to burn all infected colonies and apparatus.

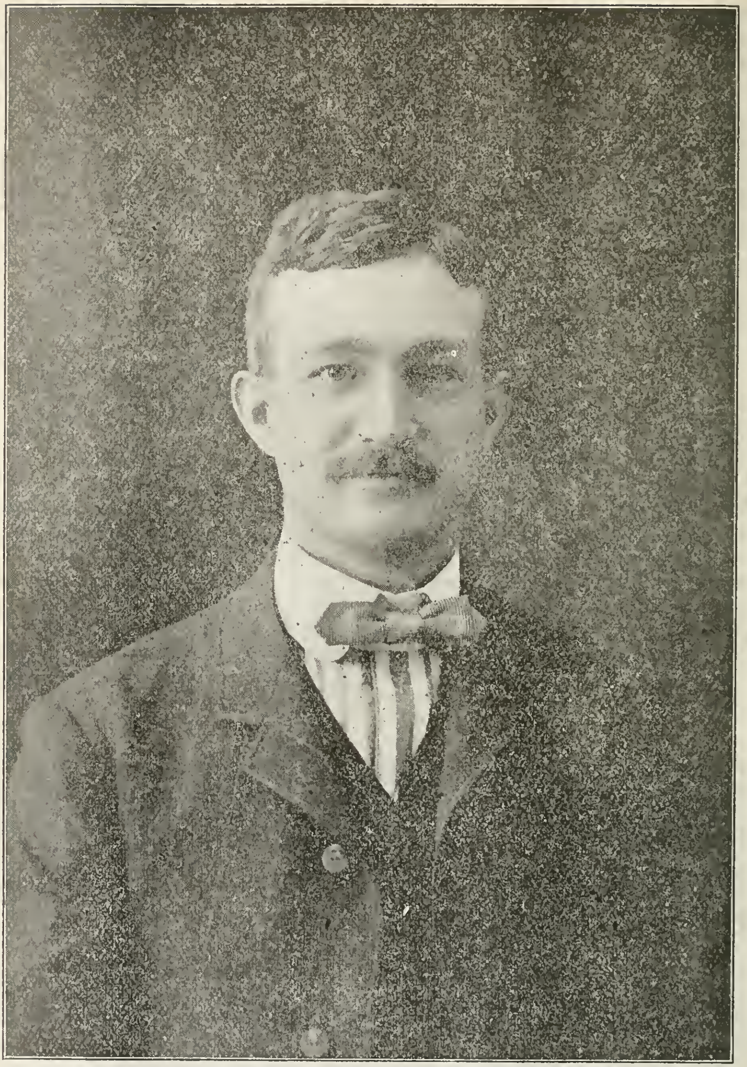
We are indebted for much of the subject matter of this bulletin to N. E. France, Inspector of Apiaries of Wisconsin, General Manager of National Bee-Keepers Association, William McEvoy, Inspector of Apiaries of Canada, Prof. F. C. Harrison of Guelph, Canada, and to bulletin No. 14 issued by the Agricultural Department of the State of Michigan.

Avertising turns stocks over and over with wonderful rapidity, no matter whether the merchant or the manufacturer does the advertising.—Progressive Advertising.

You can't give a good ad a poor position. Like the Kentucky colonel's opinion of whiskey—there isn't any poor, tho' some's better than others.—Printers' Ink.



IN BUCKWHEAT SEASON.



MR. FRED W. MUTH.

We have pleasure this month in presenting to our readers an excellent portrait of Mr. Fred W. Muth, the honey expert of Cincinnati, a tireless toiler for trade in the product of the apiary, who has traveled during the present year over eleven thousand miles to buy and sell honey.

As the representative of the firm, which bears his name, Mr. Muth is known everywhere among manufacturers where honey enters into the composition of their product. The fact that Mr. Muth has during the past ten weeks sold upwards of five hundred barrels of honey, is convincing evidence of the young man's ability to perpetuate the record of his lamented father, the late Chas. F. Muth, who for years, we believe, bore the reputation of being the most extensive dealer in honey in the United States.

Mr. Muth has grown from infancy among the bees and barrels of honey, and while it has been stated publicly that adulteration of honey could not be detected in many instances outside of a certain Philadelphia establishment, Mr. Muth assures us that though the adulteration be but five per cent. he can positively detect it, and in all his transactions "Purity" is his watchword. Mr. Muth seems to take especial delight in introducing the use of honey with manufacturers who have formerly had no knowledge of its superior qualities along their lines of business, and to this fact, doubtless, his extensive sales are largely attributable, with a consequent benefit to the producer by extending the consumption.

Mr. Muth is a member of the executive committee of the recently organized Bee-Keepers' Association of Hamilton county, Ohio, in which organization his expert skill and progressiveness are generally recognized.

NOTES AND COMMENTS.

(C. S. Harris.)

After some twelve or thirteen years of bee-keeping I have this season had two, to me, new experiences. I have for the first time had a queen which laid regularly and well, but whose eggs did not hatch, and a colony of hybrid bees which made life unbearable in the yard. I have had cross colonies before, for I like hybrids for cell building, and they are usually more or less irritable, but never one where the bees laid in wait for me and followed me about in considerable numbers.

Editor E. R. Root finds it hard to yield acknowledgement to the fact that laying queens prefer old to new comb for breeding purposes. Locality can scarcely count in this case, and the majority of testimony is certainly against him. I have this present season, blocked a number of nuclei with newly drawn foundation or a bright new comb, and I believe that a queen just laying will more readily make use of a new comb than will an old queen. During a rush of nectar the difference is not so perceptible.

The editor credits Mr. Arthur Miller with the dethroning of the umbilical cord theory by scientific investigation. Without wishing to deny Mr. Miller his just due, I believe that question was early settled for the majority by plain common sense and observation. The most astonishing feature of the case is that it was ever given such prominence in the apicultural press.

Quite frequently the advice is given to allow drones only in selected colonies. The man who thinks he can prevent drones without a regular systematic overhauling of the colony is fooled, and even then undesirable drones from elsewhere may be accepted. When all worker comb or foundation is given the bees will rear drones when it suits them so to do. The better plan is to keep only desirable queens, and even then distribute drones from the choicest among the other colonies.

That queens are sometimes injured in the mails I have just had practical proof. In the first week of July I sent out twenty queens for a friend, keeping a record of the nuclei from which they were taken. A few days ago he told me he had received word from the party to whom they were mailed stating that one of them was a drone layer. An examination of the nuclei showed the queens to have been all right at the time of shipping.

This reminds me of the only case of drone laying I have had this season, which proved to be something out of the common, or at any rate I do not remember hearing of anything similar. This queen filled one comb and one side of another with drone eggs, and then worker from that time forward.

Some years ago I had a queen many of whose workers were provided with drone heads, and a very poor provision it proved to be.

Holly Hill, Fla., Aug. 18, 1903.

In making sales at long prices a good line of advertising goes farther than a good line of ancestry.—Class Advertising.

THE HONEY CROP.

July 28th, Mr. C. Theilmann, Theilmanton, Minn., reported having taken 225 full supers—28 section each—from 100 colonies. "The finest crop I have ever had," concludes Mr. T.

Under date of Aug. 3, Mr. F. Greiner, Naples, N. Y., says: "The white honey crop will not be large here, but buckwheat is very promising, and I can already 'smell' it."

Writing us, July 25th, Mr. Morley Pettit, Belmont, Ont., says of the apiarian situation there: "We have had a good season, but not an extra one. White clover came in bloom about May 24th and is still blooming, where there has been plenty of rain; basswood made a splendid showing of bloom, but when about half open two or three days of extreme heat cooked that which was out and thus cut off the crop by half. We are now preparing to move to buckwheat location, which will be ready soon."

July 18, Mr. E. F. Atwater, Boise, Idaho, wrote: "We are busy with a fair crop of comb honey and a good crop of extracted."

W. W. McNeal, Wheelersburg, O., July 21, writes that he has been having such a good time with the bees that he neglected to prepare his usual article for publication in time for the July issue. Ohio is among the few states which will probably give bee-keepers fair returns for their labor this year.

July 20, Dr. O. M. Blanton, Greenville, Miss., advises us that he had then taken out 5,700 pounds of honey, and was again going over the apiary for the fourth time, and hives were again full. He states that the honey-flow "is grand." This is good news.

Pat writes from Cabanas, Cuba, July 16, that he extracted 300 gallons of honey last month. Cuban honey, however, is cheaper than American, and therefore 300 gallons is not a very interesting proposition.

Mr. Fred W. Muth, Cincinnati, O., recently wrote us that the bees were "just rolling in the honey." Let them keep it up, Mr. Muth knows how to sell it.

Messrs. Hamblin & Sappington, Kansas City, Mo., Aug. 8, says: "New crop of comb honey is in plentiful supply. The crop is large in western part of state."

While a fair crop has been harvested from saw palmetto on the east coast of Florida this season, two other important sources—mangrove and cabbage palmetto—have done from little to nothing all along the line.

"The honey crop is light in this section," says Mr. Thomas Phillips, Johnsonville, N. Y., writing under date of Aug. 15, "and the prospect for buckwheat is not much better. Last summer and this, have been unusually cold."

Dr. L. E. Kerr, Germania, Ark., July 20, says: "This has been the best season, so far, that we have had for years, in old Arkansas."

July 20, Messrs. R. A. Burnett & Co., Chicago, state the situation thus: Some consignments of the crop of 1903 are offered on this market; the comb is in the majority of cases No. 1 to fancy, and the quality of the very best. It is many years since this neighborhood yielded in quality and quantity as now. Demand has not come for it at the present time, but will within a short time, as it is being told that an abundant harvest of fancy honey is upon us.

Writing from California, August 16, Mr. Thomas Chantry informs us that he will soon leave for the East with a car load of honey to sell. Mr. Chantry is one of The Bee-Keeper's staunchest friends, and when he is on the road we always have a traveling representative who gives a most satisfactory account of himself

Thirty thousand persons participated in the great civic parade at the world's fair dedicatory ceremonies on State Day, May 2.

THE AMERICAN BEE-KEEPER

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THE W. T. FALCONER MANFG. Co
H. E. HILL, - EDITOR.

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Matters relating in any way to business should invariably be addressed to

THE AMERICAN BEE-KEEPER,
Falconer, N. Y.

Articles for publication or letters exclusively for the editorial department may be addressed to
H. E. Hill,
Fort Pierce, Fla.

Subscribers receiving their paper in blue wrapper will know that their subscription expires with this number. We hope that you will not delay favoring us with a renewal.

A red wrapper on your paper indicates that you owe for your subscription. Please give the matter your early attention.

Editorial

Our offer to send The Bee-Keeper three full years for $1 in advance is still open. We shall appreciate the kindness of our readers in making this fact known to their bee-keeping friends. Every friendly word spoken of our journal to others helps to increase our list and make the paper better.

BEE PARALYSIS.

In Gleanings for August 15, 1902, Mr. Doolittle conducted an exhaustive (?) "conversation" with a quirist in regard to bee paralysis, in which the matter of a cure for the disease is regarded as an "unanswered problem." Editor Root eagerly supplemented the "conversation" in part thus: "So far as I can see, friend Doolittle is orthodox in his teachings, as he usually is, regarding paralysis. Scientifically we know little or nothing about it; and as to a cure, we know no more." In his issue for September 1, same year, Mr. Root again remarks, "So far I believe there is no cure that has ever been named for it." In the American Bee Journal, June 4, 1903, in response to a question, Dr. Miller advises his quirist that, "Unfortunately, no reliable remedy for paralysis can be offered." In the same journal, for June 11, another of Dr. Miller's questioners relates an experience in treating a number of colonies with sulphur, in which, "in about three weeks they quit dying,' and he asks whether the sulphur did any good, and the doctor replies, "I don't know; I doubt it'."

As it appears to us, this "nameless disease" was so long without a cure that even the veterans cannot get over the idea which prevailed so long that no cure is known; while it has for years been an established fact that it can very easily be cured in every case, and that by a very simple method, as we have frequently demonstrated, to our entire satisfaction, by what is known as the sulphur method, brought to public notice and explained in detail by Mr. O. O. Poppleton, in the Bee-Keeper for August.

While the ravages of foul brood have been undermining the bee industry in Ireland the department of agriculture there, according to the Irish Bee Journal, has been sitting for two and a half years before their dusty pigeonholes crammed with urgent documents bearing upon the necessity for immediate and effective action, and the august body has not yet succeeded in assuring itself that the matter is of sufficient importance to warrant doing anything farther than to merely continue to "sit and consider." As a result, Editor Digges, through his Journal, is after the wise counsellors with a very sharp stick, which will probably goad them to action without much further delay.

In the manipulation of colonies—forming nuclei, uniting or taking from one and giving frames with adhering bees to another colony, for whatever purpose—the advice is frequently given, "Be sure the queen is not among them." The novice, it appears, sometimes trusts to a careful examination of the transferred comb to make sure of this fact. This, however, is very unreliable, and may often lead to the loss of a queen. The only way to "be sure" is to find the queen and set apart the comb upon which she is found, then one may use the remaining combs as desired with the assurance that the queen is safe. The fact that we do not see her upon the combs used, is by no means a guarantee that she is not there.

The item "Bee Paralysis," on page 213 of this issue, should have appeared last month, but was crowded out. Since then Dr. Miller, through the American Bee Journal, explains that owing to press of business affairs he had failed to give Mr. Poppleton's article, published in The Bee-Keeper in 1901, deserved attention, and therefore properly and explicitly sets himself right before his readers; while Editor York takes occasion to reproduce the article entirely, in order that his readers may not miss the important information therein contained. There are some other editors and prolific apiarian writers who should rise and explain their ignorance of important information with which Bee-Keeper students have long been familiar.

Much was said a few years ago, pro and con, in regard to the merits of the Punic bee, introduced into England by Mr. John Hewitt. The broadest kind of claims for their superiority are yet made in "the old country," by some who have tested this black race, and as there seems to be nothing especially new or novel in the line of stock to engross the attention of American bee-keepers at present, it is probable that the Punics will come in for a share of attention very soon.

Referring to the treatment of foul brood with formalin gas, and the article which we had designed to present pertaining thereto, Mr. C. H. W. Weber, the ardent champion of the new system, writes that he has noticed results not altogether satisfactory since his article was written, and that he hopes for more favorable results from experiments now in course of progress, and suggests that the publication of the article be deferred until such time as his experiments make it advisable.

Bee-Keeping is an occupation which is full of interest, and is said to be quite a fad with British pharmacists. Honey is an official drug, which may account for the association of ideas. The American Bee-Keeper is a neat and meaty little magazine, devoted to our industrious friend who improves each shining hour, and it is as welcome an addition to the exchange editor's table, as is the product of apis mellifica to the dining-room table.—Southern Drug Journal.

This is the season when the hungry school boy arrives home promptly at 5:30 to 7 p. m. with nothing in his stomach but the remnants from the dinner-pail and a few wormy apples plucked by the wayside. In this famished condition the gnawings of the inner boy should be appeased pro tempore by a few slices of bread, a glass of milk and a slab of buckwheat honey. See our picture?

This department is somewhat abbreviated this month in order to give space to a greater quantity of the excellent material supplied by our staff of writers in the field which, we feel sure, will be appreciated by our readers.

The Progressive Bee-Keeper for July quotes extensively from the "Arkansas Bee-Keeper." The material is exceptionally good, and interesting, but we are unable to find "where'bouts" the Arkansas Bee-Keeper lives.

The Australasian Bee-Keeper has absorbed the Farm, Bee and Poultry Review of New South Wales.

Mr. H. J. Shrock, whose hive protector was described on page 180 of our last issue, informs The Bee-Keeper that a slight error occurs in the second paragraph, third line, which should read "two and a-half inches wide," instead of "one-half inch wide." Of course the printer made the mistake—he makes all of them.

The careful attention of the beginner is invited to the article in this number of The Bee-Keeper entitled September Work, by Mr. Arthur C. Miller. The points which he makes in regard to the importance of leaving ample stores for winter cannot be too strongly emphasized.

As we go to press with this issue, August 24, Gleanings for August 15 comes to hand with a photo-engraving of a batch of sixteen beautiful queen-cells, illustrating the fact that "Swarthmore" methods have taken Root at Medina.

We have to acknowledge the receipt of a photograph of the apiary of Mr. J. P. Moore, the noted queen-breeder of Morgan, Ky., through the kindness of Mr. Fred W. Muth. We regret exceedingly that the picture is not suitable for reproduction in our columns, owing to lack of strength.

It is to be regretted that two opposing factions should have developed in the National Association. One is characterized as "the push," while the other might as aptly be termed the "would-be-push."

If you have been successful, tell us about it in detail. If you have made a failure, be equally explicit. Brief letters setting forth the whys and wherefores of success and failure are generally instructive.

Sections for comb-honey should never be put on any but the strongest colonies.

Never look for thousands of replies from a single publication—even though the solicitor practically guarantees such returns—few ever produce them. —The Advisor.

GOOD SEASON IN ILLINOIS.

I am situated in Illinois, twenty miles from Galesburg and thirty miles from Peoria.

This has been the best season for bees in many years, on account of an abundance of white clover. Up to date (Aug. 20) I have taken off about 1,700 pounds of comb honey and 300 of extracted, all from new combs, and have increased from 12 to 55 colonies, mostly by natural swarming. Such excessive swarming, I know, is contrary to general practice, but I wanted increase, and worked to get surplus from swarms.

Bee-keepers who gave their bees necessary attention and who got a stock of supplies in time have a good crop of very fine honey, which is selling fast at 12 1-2 to 15 cents per section. Times are good among farmers and I am selling to them direct in case lots; one yesterday took five cases, 120 section boxes. Smartweed is blooming, but is not yet giving much surplus. I thing our locality is overstocked. Owing to the excessive swarming this season, the number of colonies has been increased by fully 300 per cent. over last year, and the woods are full of bee-trees.

Worms are killing the white clover, hence the prospect for next season is not at all encouraging. Possibly late rains may help the situation, however.

I visited Galesburg, a city of 16,000 inhabitants, a few days ago, and found honey retailing fast at 15 cents. The merchants buy it in thousand-pound lots. It is so nice and white that it attracts attention—like strawberries in strawberry time—but the producers are crowding the merchants; some offering for 11 cents, and I think January 1 will see the supply short in this market, if it continues to move as at present. Fraternally yours,

J. E. Johnson.

Williamsfield, Ill., Aug. 20, 1903.

In order to make your advertising efforts what they are intended to be, you need animation, ideas, inspiration and information about the large and complex subject which constitutes modern publicity, and the more you get the better.—Printers' Ink.

When writing to advertisers mention The American Bee-Keeper.

CALVIN GOES TO CHURCH.

(Mary H. V. Vest).

I went to church last Sabbath—
(I didn't want to go)—
But mother made us all dress up
And set in the children's row;
For a man had come from the city,
Because 'twas children's day,
To preach to us country kidses
In a kind of kiddy way.
He chose the bee for a subject,
And then he waded in,
And what he didn't know of bees
Was really a shame and sin.
He described the little critter
As a mighty good-natured sort,
A-makin' "honey from pollen"—
I couldn't help but snort!
He said roses and morning glories
And popies and such as that
Was the kind of pasture the bees liked.
I wondered where he was at!
Not a word about maple or thistle,
Nor apple-bloom nor lin,
Nor the troughs of sugar-water
They are always tumbling in.
And Josey Mary Dawson
Just scared me half to death;
She threatended to tell him better—
It fairly took my breath.
And the moral of that seromn
Was the funniest part of it.
I was afraid Joe Dawson
Would die of a laughing fit,
When he said in real earnest
(He wasn't jokin', now mind)
"The bee, you see, is an animal
Who never goes to find
Pollen for makin' honey
In any kind of weed.
And here is a pretty lesson
I wish you all to heed:
Never go into company
That isn't the very best;
Associate with poppies
And roses and all the rest."
And say, do you think a preacher
From the city ought to come
And talk to country children
As though we were so dumb
That he can make us swallow
Such silly talk as that?
He don't know a bee from a hornet
Nor a house-fly from a gnat.
And Josey Mary Dawson
Wants me to write and say,
She thinks that city preacher
Had better stay away,
At least, till he leearns that honey
Is only gathered—not made.
And Josey Mary told me
She wouldn't be afraid
To have my letter printed
And let Mr. Oldham know
That if we are green and little
And I am Josey's beau,
We was raised next door to a bee-hive,
And know which the queen-bee is,
And drones and workers and bee-bread
And all such mysteries.
But Josey Mary is sweeter
Than honey or anything,
And she pities Mr. Oldman,
And says if he comes next spring,
She'll take him out to the bee-hive
And tell him what to say,
When he preaches to country children
Next year, on children's day.

Ada, O., Aug. 20, 1903.

WORLD'S FAIR NEWS NOTES.

Hawaii has appropriated $50,000 to defray the expense of an exhibit at the world's fair, St. Louis.

The world's fair aerial tournament to be held at St. Louis next year has another entry. W. L. Tanney, of Wheeling, W. Va., has invented an airship with which he is going to compete for the $100,000 prize.

Greece will erect a pavilion at the world's fair and will also make exhibits in several of the different departments. Among the interesting things exhibited will be reproductions of old Greek statuary.

H. E. Huntington, the multi-millionaire, is buildig a palatial private car which will be exhibited at the world's fair, St. Louis. The type will be a sleeper, and will be adapted to use on both steam and electric roads. The car will cost over $25,000

Buffalo, N. Y., will have a municipal exhibit at the world's fair, St Louis. The exhibit is to cost $12,500. The aldermen have appropriated $7,500 and $5,000 is being raised by private subscription through the Merchants' Exchange and the Manufacturers' Club.

Mrs. Lorraine J Pitkin, vice president of the auxiliary board of lady managers of the World's Fair Fraternal Building Association, has been elected department commander of the Womans' Relief Corps of the Illinois division of the G A. R. Mrs. Pitkin has been identified with fraternal movements for the past twenty-five years.

HONEY AND BEESWAX MARKET.

WASHINGTON GRADING RULES.

Fancy.—All sections to be well filled, combs straight, of even thickness and firmly attached to all four sides; both wood and comb unsoiled by travel stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy white," "No. 1, dark," etc.

Chicago, Aug. 7.—Consignments of the new crop are coming to commission houses that have not had honey for years past, and as there is not any consumptive demand they are finding difficulty in disposing of it. Under such conditions it is hardly possible to give accurate prices as some merchants ask 10 cents for honey that others hold at 15 cents. The prices given in our last quotations are asked but feeling is unsettled. Beeswax steady at 30 cents.—R. A. Burnett & Co.

Kansas City, Mo., Aug. 8.—The demand for honey at this date is light, with good supply. We quote comb 13 to 14c. Extracted, 6 to 7c. Beeswax is in light supply at 30c.—Hamblin & Sappington.

Buffalo, N. Y., Aug. 7.—The honey market is just starting in very moderately. A few sales are made of new, fancy, 1-lb. combs at 15 to 16c. Common, dark, etc., from 13 down to 10c. We do not advise very large shipments, but very moderate ones at present. There are several lots of old honey in this market that is just about unsaleable. Some fancy beeswax would bring from 32 to 33c.—Batterson & Co.

Cincinnati, O., Aug. 6.—The supply of extracted honey about equals the demand. We are selling amber, in barrels, 5½ to 6½c, according to quality. White clover, in barrels and cans, 7 and 8½c respectively. Comb honey (Fancy) in no-drip shipping cases, 16 to 16½c. Beeswax, 30c.—The Fred W. Muth Company.

Cent-a-Word Column.

The rate is uniformly one cent for each word, each month; no advertisement however small will be accepted for less than twenty cents, and must be paid in advance. Count the words and remit with order accordingly.

FOR SALE.—1280 acres Timber Land; plenty of water; fine for an extensive Bee Ranch. Season June to November0 Address William Smith, Cameron, Kern County, Calif.

WILL SELL half interest in my apiary, pineapple and orange plantation. Good apiarist will have exclusive charge. D. DALY, La Gloria, Cuba. 8-2t

WANTED—To exchange six-month trial subscription to The American Bee-Keeper for 20 cents in postage stamps. Address, Bee-Keeper, Falconer, N. Y.

AGENTS WANTED to sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Jamestown, N. Y.

FOR SALE—A Hawkeye, Jr. Camera Complete. Uses both film and plates. Cost $8.00, will sell with leather case for $3.50 cash. Address Empire Washer Co., Falconer, N. Y.

A TANDEM BICYCLE (for man and lady) cost $150, in first-class condition, was built to order for the owner. Tires new. Will sell for $25 cash. Satisfaction guaranteed. Address J. Clayborne Merrill, 130 Lakeview ave., Jamestown, N. Y.

REPORTERS WANTED—In every city, town and village in the United States to send us the names and address of parties who want to buy a Farm Timber Land, Ranch, Residence, Store Building, Mill, Factory, Lumber or Coal Yard. Stock of Goods (any line, anywhere), Patent Right, or want a Partner. A bright young man or lady will answer. Liberal compensation and regular income can be made. Address BARRON'S MONTHLY BULLETIN, INDIANAPOLIS, IND.

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MODERN ELOQUENC

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THOMAS B. REED
Editor-in-Chief

North, East, South and West and the Motl Country as well, have been searched for gems every field of eloquence.

Here was a lecture that had wrought upon t very souls of great audiences; there an after-din speech, which "between the lines" was freighted with the destinies of tions. Here was an eulogy expressing in a few but virile words the lo the honor, and the tears of millions, and there an address pregnant w force—itself the fruit of a strenuous life's work. Or, perchance, a remin cence, keen, scintillant repartee, or a story potent in significance and afla with human interest. Matter there was in abundance, for English-speaki peoples are eloquent, but *the best—only the best, only the great, the brillia the worthy to endure*—has been the guiding rule of Mr. Reed and his c leagues. Their editorial labors have been immense.

Whatever the viewpoint, this work is without precedent. It has no pre cessor, no competitor. Speeches that have been flashed across continen lectures that have been repeated over and over again to never-tiring au ences (but never published), addresses that have made famous the m the time and the place—these are brought together for the first tin and with them a large number of the wittiest sayings of the wittiest men the Nineteenth Century.

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"The tenderest tribute to woman I have ever read," said Senator Do var when he read the manuscript of Joseph Choate's after-dinner speech "The Pilgrim Mothers."

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MAIL ADDRESS..

[A-127]...

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This page is intended as a guide for queen buyers, from which they may select the stock desired, and breeders are invited to make use of it for their announcements, at the rate of $3.00 a year per card, payable strictly in advance.

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aranteed..

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out the choicest 3-banded and golden Italian
eens that skill and experience can produce.
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the fact that instruction need not be dull,
amusement shallow and frivolous."—Prof.
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ITERION PUBLICATION CO.,
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We have an awful appetite for orders."
THE W. T. FALCONER MFG., CO.,
-keepers' Supplies Jamestown, N. Y
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ue.

"How to make business?" is the paramount question with men of business. Horace Greely would have answered it by saying, "The way to make business is to make it." But the modern successful business man has answered it to his complete satisfaction. He says, "The way to make business (and the way to keep it) is by advertising."—Printers' Ink.

Work on the French national pavilion, a reproduction of the Grant Trianion at Versailles, France, will be begun soon at the world's fair, St. Louis.

The British National Pavilon at the world's fair will be a reproduction of the orangery or bouquet hall of the Kensington palace, in Kensington Gardens, London.

Live stock breeders of Canada will make a big display at the world's fair at St. Louis. They have asked for government assistance to the extent of 250,000 pounds.

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JOHN W. HANN,
Wauneta, Neb

8tf

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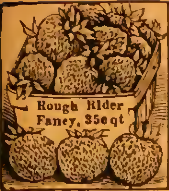

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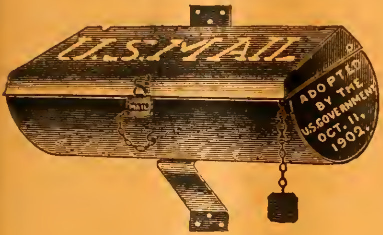
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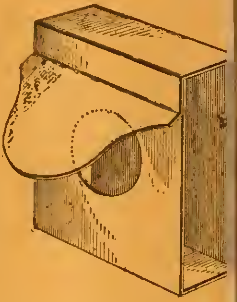

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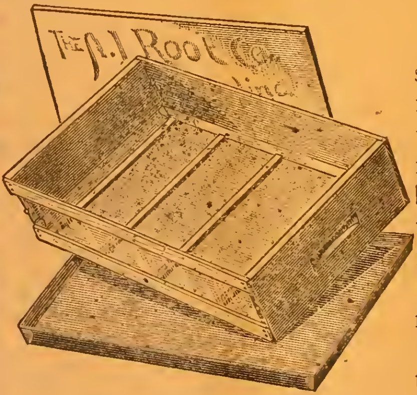

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12, 16 and 24 lb. sizes for regular 4¼ i
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not be overestimated, and wide-awak
bee-keepers are beginning to realiz
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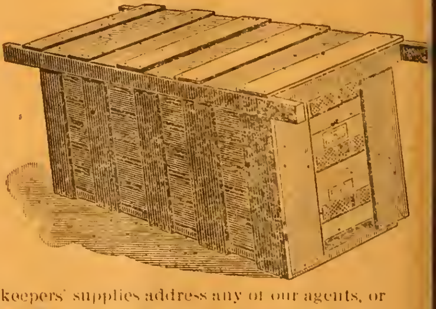

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OCTOBER

1903

VOL. XIII

NO. 10

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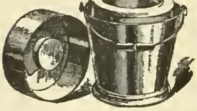

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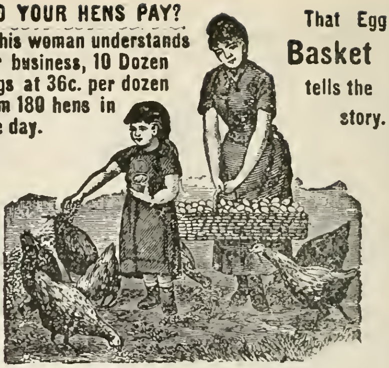
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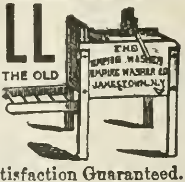
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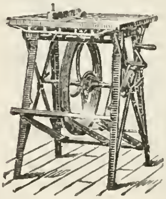

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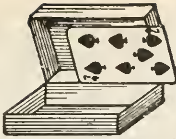

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JAS. U. HARRIS, GRAND JUNCTION, COLO., PRESIDENT-ELECT OF THE NATIONAL BEE-KEEPERS' ASSOCIATION.

INOCULATING THE SOIL.

As a Means of Effecting Its Adaptation to the Culture of the Clover Family.—How to Grow Red and White Clover in the West, and Alfalfa in the East and South.

(J. E. Johnson.)

IT HAS been said that the greatest study of mankind is man; but the next greatest study is the soil, for upon the soil depends the preservation of man. Of dust was man created; from the products of dust, or the soil, must his mortal body be fed all the days of his life and unto dust shall his mortal body at last return.

Upon the condition of the soil depends largely the success of the bee-keeper. When two bee-keepers disagree on almost any question very often that term "locality" is used to prove that both are right. What is meant by locality?

For my part I believe that any honey-producing plant will produce honey or rather nectar, in one part of the United States as well as in another, if the soil and other conditions are favorable to the growth of the plant.

The clover family no doubt stands at the head of all honey producing plants where they do well. Let us look into the condition of the soil for the raising of the different clovers. There is probably no other plant that requires as much nitrogen as the different clovers. One of the most essential elements of the soil is nitrogen. Of course, there are other elements such as potash, lime, phosphorus, etc., that are necessary, but nitrogen is the element most often lacking.

Now if we burn or cause to be consumed by fire any vegetation the ashes will still contain the lime, potash, phosphorus, etc., but the nitrogen will escape to the air and is a total loss. In form of fertilizer you can buy back the other elements from one cent to four cents per pound, but nitrogen will cost from 13 to 20 cents per pound. Wood ashes contains something like 600 pounds of lime to a ton; 100 pounds of potash but no nitrogen. Nitrogen is always being lost. four-fifths of the air is nitrogen and one-fifth oxygen. When we breath the air we consume or burn up one-twentieth of the oxygen that we inhale but no nitrogen. Plants are benefited by both oxygen and nitrogen, but no plant can of itself gather nitrogen and retain it or place it back in the soil.

If the nitrogen could not in some way be taken from the air and placed back in the soil the earth would in time become a barren planet. Leguminous plants can, however, when aided by their own species of bacteria, gather nitrogen in abundance from the air and fix it in itself and thereby in the soil. All clovers are of the legume family and require much more nitrogen than any non-leguminous plant. Clover can be grown well without bacteria if the soil be abundantly fed with nitrogen, but if so grown the clover will exhaust the soil far more than any other non-leguminous plant. But even the rich black prairies of Illinois are not rich enough to grow any of the clovers successfully without their own species of bacteria; but I feel certain that western Kansas or any other part of the West could grow both red and white clover if they would get infected soil from the East and inoculate their soil; and if the East, North or South would get soil from alfalfa fields in the West they could grow alfalfa to perfection.

I have made several trips to the West in the last 15 years and it has interested me very much to notice clover growing a little further west every time. That line of clover has moved from the far East. As it passed over Illinois it even completely run out all prairie grass, and now thousands of acres which were once prairie grass and have never been plowed, is all white clover and blue grass. The two always go together, because the white clover gathers nitrogen and fixes it in the soil for the blue grass as well as for itself.

If the clover moves West ahead of the bacteria, it perishes, and if the bacteria moves ahead of the clover, it also perishes. Both must move together. We have on record, however, that General George Washington raised large fields of alfalfa successfully and that he also was a bee-keeper to some extent, and that he ate honey and corn bread regularly for breakfast, owing to poor teeth. But whether his alfalfa produced honey or not I do not know; but I think it quite likely. General Washington was quite an extensive farmer in his later days owning many thousand acres of land.

Alfalfa has been tried in Illinois for many years by different ones but without success until Prof. Hopkins began growing it on infected soil, where he has found it to do well, producing as high as 10½ tons per acre in a single season. Prof. Hopkins of the Illinois Experiment Station has this year sent infected soil to something like 200 farmers in Illinois for alfalfa growing, so Illinois bids fair to become an alfalfa-growing state.

Now, one thing more. Of all the bacteria that inhabit the soil and cause the clover to live from the nitrogen of the air, sweet clover is probably the most powerful of all, which shows plainly for itself, as it will thrive and produce both seed and honey in abundance on soil so poor that the worst weeds will not grow at all, and even on alfalfa land that is poison to nearly all other vegetation.

Why is this? Simply that sweet clover when aided by its own bacteria lives almost entirely from the nitrogen of the air, (of course, getting a small amount of phosphates, etc., from the soil). Not only so but these nitrogen gathering bacteria are constantly and silently gathering nitrogen—the most precious element to plant life—and placing it in the soil.

One sweet clover plant will furnish a home in its tubercles for a thousand million bacteria, or even more. Now in the far East are old farms which have become so deficient in nitrogen that they are considered worn out or worthless and have been abandoned, notwithstanding these farms contain the other elements in abundance or could be so with slight cost, as the other elements are cheap in price.

If sweet clover were sown on these same farms they could be made valuable and rich almost without cost. Infected soil would probably have to be also sown to get quick results, but when once set thickly to sweet clover with their nitrogen gathering bacteria ten acres of the same would gather nitrogen from the air and fix it in the soil when plowed under faster than one man could haul it in a wagon from the nearest city in the form of barnyard manure. That despised sweet clover will some day be found to be the only hope of reclaiming many barren farms.

For the benefit of the Texas Experiment Station who tried different honey plants and failed, I want to say, that in order to get sweet clover to do well, much good would result if you would get soil from a thriving sweet clover patch and inoculate your soil. And in the same way you could grow other clovers. All seed contains bacteria, but especially in a dry season there would not be enough to be of much benefit until the clover had perished. These bacteria being a form of vegetable life moisture is necessary to their rapid propagation. I sowed this spring a patch of alfalfa (not quite an acre), and sowed on 100 pounds of infected soil. I find it takes nearly all the first season for the bacteria to multiply so as to fill the soil as no tubercles were formed until July and now, September 9th, about one-half of the plants have tubercles. The alfalfa looked very sick and yellow in July but now it has taken on a dark green color and looks fine.

CATNIP.

I have experimented a good deal with catnip. Besides sowing in waste places I sowed one acre last fall. I find that it does best in very rich soil, in fact, in poor soil it did nothing. Where there is waste land containing leaf mold, old brush piles or any decaying logs or wood I believe catnip ahead of anything as a honey plant, but for poor or only medium rich soil I think sweet clover is far ahead of anything I have tried.

Williamsfield, Ill., Sept. 9, 1903.

Mr. J. S. Harbison, the venerable Pennsylvanian who introduced apiculture on the Pacific coast away back in the fifties, and there earned the distinction of being the largest bee-keeper in the world—owning at one time six thousand colonies—was present at the recent convention at Los Angeles, where many prominent apiarists of the United States met him for the first time, and thoroughly enjoyed the acquaintance there formed. Mr. Harbison is now 77 years of age.

CONTROLLING SWARMS, HIVING, ETC.

(F. G. Herman.)

WHY DO BEES swarm anyway? Why don't they settle down and stick to their knitting, instead of breaking up house-keeping just at a time when everything begins to look prosperous?

Well, the fact is, prosperity breeds discontent, and the old home is becoming too crowded, besides it is Nature's way of providing increase and prolonging the race. Providence has given the honey-bee this instinct. There are several conditions upon which the issuing of swarms hinge. The first and most important factor is a present honey-flow; another is a multitude of bees. Excessive heat and a crowded hive are also incentives to induce swarming and will hasten the exodus. Now in order to retard or discourage swarming, we must meet these conditions. It must be remembered that the larger the colony the better the prospect for a crop of honey. If it were possible to breed out the swarming trait entirely we would have no further difficulty, but this seems impossible.

A NICE SWARM.

The method that I have been practicing of late is to furnish each colony of bees an extra hive of empty combs, that is, at the approach of swarming time, or a week or two after the section boxes have been given, I slip an extra hive body of empty combs under each hive and close the upper entrance, compelling the bees to take possession of the extra set. This gives a double brood-nest for the queen to supply with eggs. This has proven with me to be only a partial success. About one-half of the colonies swarmed notwithstanding. But nevertheless, the plan is a good one; my average yield exceeding any other previously tried method. I might say, the colonies which had no thought of swarming stored the most surplus honey, one colony reaching 180 pounds. But with regard to those which did swarm, the swarms were necessarily extra large on account of the double brood-nests, and, of course, issued a few weeks later, but gave excellent results.

I practice several ways of hiving swarms, but will only describe the one here which the picture illustrates. If the swarm has clustered on the outer edge of some tree, where it only necessitates the cutting of a thin branch, I prefer this plan, providing, of course, they are within reach of my ladder. I have found it to be an excellent plan and consequently have practiced it for many years, to spray a swarm lightly with cold water before hiving. Water seems to be very refreshing and soothing to the bees during the heat of the day besides the added heat by excitement of swarming, and will often cause the bees to remain hanging until evening when it is more convenient to hive them. By taking a pair of pruning shears and clipping off the branch gently, they may be carried to the hive without a single bee leaving the cluster. I might say, that in the picture I am only pretending to hive the swarm. The manipulator of the camera was too timid to accompany me into the apiary, and upon much urging could scarcely be induced to snap the picture on the lawn. Besides those who have had experience in hiving swarms know that when bees are shaken into a hive they will immediately crawl out, but when they are shaken in front of it they will readily crawl into it and assume possession. Newly hived swarms should be shaded for a few days and the hive entrance enlarged to supply sufficient ventilation. The section-boxes should be transferred from the parent hive to the one containing the newly hived swarm which now has almost all of the field bees. The parent hive being so depleted will have no use for sections for at least a month or more.

Englewood, N. J., Aug. 13, 1903.

THE HONEY BEE

Hauled Down from the Exalted Position Which It has Occupied from Time Immemorial as the World's Emblem of Industry and Other Virtues.

(Arthur C. Miller.)

FOR UNTOLD AGES the bee has been the emblem of industry, unselfishness and reckless self-sacrifice. Some authors have seen reverence and respect. Sentimentalists have woven fairy tales about the beautiful devotion of the bee to the safety and good of her sisters.

It is passing strange what a lot of freak ideas exist about the bee and how like a snowball the rolling nonsense has gathered unto itself in its progress the vaporings of every idle dreamer, of every emotional pietist.

The bee is a thoroughly selfish animal, devoid of nearly all the virtues attributed to it and actuated solely by the laws of self-preservation and parental instinct. Seemingly a bold statement that, but let us see. The original type of bee from which the honey-bee is descended is believed to be well represented by the solitary bees of the present. The females of this type select a place for the reception of their eggs and rearing of their young, each according to the habit of her kind. The selection made, food is gathered and stored, the egg or eggs laid and with some the young are left to themselves and with others, further attention is bestowed.

The next marked stage in the evolution is perhaps well represented by the common bumble bee. Here the female establishes a nest much as does the "solitary" bee, but the young are imperfectly developed and lacking the power of reproduction but possessing the parental instinct devote themselves to all the natural work of the female except egg-laying. They care for the young, which so far as their instincts guide them, are to them their own. Only sufficient food is stored to keep the bees through ordinary spells of foul weather, but slight as is the amount it evinces an instinct of preparing for future needs quite comparable to that of the honey-bee. With the honey-bee we find the instinct to store for the future much magnified and the hibernating instinct virtually eliminated. But all factors of food gathering, brood feeding, comb construction, etc., are but the expression of the same parental instinct as actuates the perfect female "solitary" bee.

It may be asked, what all this has to do with practical bee-culture? Just this, the law of the hive is a simple commonplace instinct, not a complex problem. Let the novice approach his bee studies with this in mind and he will find himself freed of much anxiety and uncertainty.

Providence, R. I., Sept. 5, 1903.

GENERAL NOTES.

(M. F. Reeve.)

WINTER PROTECTION.

WHERE YOU can't get building paper to make caps of, the ordinary newspaper makes about as good a winter protection as is needed. Take five or ten newspapers, unfold them and tack one within the other so as to make a blanket, and lay across the hives so as to hang down the sides and back to within a few inches of the bottom-board. Fasten with ordinary carpet tacks driven through stiff pasteboard pieces about an inch square. This prevents the tacks from tearing loose from the newspapers during "stiff blows."

An effective wind-break may be

made of boards nailed to cleats and coming as high as the top of the supers above the hive bodies. Braces may be nailed to these arrangements so as to prevent too much pressure against the hives and stands.

When you see your bees boiling out of the hives on fair, sunshiny days during the winter you will feel repaid for the little outlay of muscle, nails, paper and time you have taken.

Protection and warmth save many pounds of honey in keeping up the temperature within the little honey circle.

PHILADELPHIA ADULTERATORS.

The State Dairy and Food Commissioner is after the Philadelphia storekeepers who sell adulterated products. Lard, butter, syrup, cider, vinegar, and honey have been analyzed and found to be sophisticated to such an extent that many prosecutions have been brought before a magistrate who has been kept busy levying $50 fines.

There is one concern in Philadelphia which sells what is called "compound honey," to the retail trade. There is very little of the real article in the so-called honey, the remainder being glucose. The word "compound" is printed on the labels in such small letters that unsuspecting buyers are tempted by the price to purchase thinking they are getting pure honey.

SWARTHMORE INTERVIEWED.

I rode into Philadelphia on a Darby trolley car recently with Mr. Pratt, the Swarthmore queen breeder. He had with him a bunch of Benton queen cages in which he was shipping a lot of golden queens to foreign countries. He told me the business just then was booming and that he had calls for all the queens that he had on hand.

In conversation he said he had taken a trip in the early spring to Florida for the purpose of locating a branch apiary where he could raise early queens. His fancy was for the neighborhood of Jacksonville, and I think next spring will find him installed in the Land of Flowers prepared to supply queens as early as any one.

With his system of breeding in the use of diminutive nuclei hives, I rather think things will hum as well as bees. So keep an eye open for Pratt.

THE CUBAN SITUATION.

While he was in Florida he had talks with some returned Argonauts from Cuba. They had but one cry: The land is rotten with foul brood, and that they were glad enough to get away to the States again.

It looks as if many years will elapse, if ever, before Yankee apiarists will locate in numbers in Cuba if they are to be exposed to the ravages of this disease through the careless, antiquated methods of the natives.

STARTERS VS. FULL SHEETS.

A great mistake, in my experience, is made by writers who advocate the use of starters of foundation in hiving swarms.

There is always the possibility that given only these instead of full sheets the bees will build much drone comb. In finishing off the bottom of a comb they seem to get tired of the job and fill in about twelve to fifteen rows and sometimes more, with large cells. Whereas, when they have full sheets of foundation they build worker cells nine times out of ten clean to the bottom bar.

While on this subject let us inquire why is it that the makers of foundation persist in using the worker or small cell dies for section foundation instead of stamping drone cells on the sheets?

Natural comb is generally composed of large cells. Bees are economical of wax and build drone cells for the reason.

They do some queer things, too, in the way of cell building. Being short of division boards one day in hiving a small swarm that alighted on a tree near my home I used a Doolittle feeder for a substitute. Although work prevented me from examining the young colony for several weeks and it went ahead and built up strong. But when I opened the hive to see how things were coming on I found the new boarders had not only filled the combs on which they were hived but had started in to fill the feeder as well. I pried off one of the sides of the feeder and disconnected four rows of comb built from side to side and filled with honey. If I had let the little workers alone no doubt they would have filled the feeder solidly with comb and honey. But I removed the feeder and gave them a regular division board.

Rutledge, Pa., Aug. 10, 1903.

THE DEPTH OF FRAMES.

(Dr. L. E. Kerr.)

IN THE APIARIES of bee-keepers extensive and unpretentious, there are in use at the present time an almost endless variety of styles and sizes of brood-frames. There are, in truth, vastly too much variance along this line for the accomplishment of the most good to the bee-business. The really good ones, however, it must be admitted, are not in too great evidence, unfortunately. Though we can make them answer our purpose, where we have no other choice, our best frames are far from perfect; while the vast majority are intolerable and have hindered much the advancement of the pursuit.

Perhaps, in determining upon the value of a frame, one of the foremost considerations is the depth; for upon this the amount of honey secured will depend to a very great extent. All are aware that, in the production of comb-honey, there is a depth which can be overstepped only by an accompanying decrease in surplus. Not to show where this line should be properly drawn, but to point out why it is a mistake to use a frame of too great a depth, will be the aim in this article.

In the production of comb-honey it is an indisputable fact that the upper part of the brood-nest should, while surplus is being stored, be kept immediately next the honey contained in the super. This, rest assured, will not be the existing condition if the frames used are deeper than at least the Langstroth.

With a prolific queen, the amount of honey stored below, in a hive the depth of the Langstroth, will be small; still, there will always be some. Owing to these circumstances there seems to be a tendency, just now, toward a frame even more shallow than the Langstroth. A frame is wanted of a depth that there will be no honey whatever stored below during the season in which the surplus receptacles are on.

Some one has said that a deep frame winters best where the climate is a cold one. So will an old box winter the bees in a still better condition; but no one would think of going back to the old-fashioned box hive on that account. Luckily, however, this talk of deep frames being best for winter is all nonsense, and a colony on Langstroth frames, if they have sufficient honey, will stand an equal chance with any in the world.

Germania, Ark., Aug. 24, 1903.

NON-SECTIONAL BROOD-CHAMBER HIVES.

(W. W. McNeal.)

WITH THE added experience of another honey harvest I reaffirm my belief in the efficiency of large non-sectional brood-chamber hives.

My conversion to the big hive and system was against my will, for I was an ardent admirer of the little hive and its supposedly superior merit. The written story of it was delightfully fascinating to me. For years, long since past and gone, I clung to the principles embodied in the sectional brood-chamber. But that, too, is past and gone. Dissatisfaction with, and the abandonment of the sectional hive, in part, was but the natural results of hope long deferred by the repeated failure of this hive to give that numerical strength of colony early in the season that is so necessary to success.

Neither climatic condition nor floral surroundings here favor the hive and system of management. Recourse to the sugar barrel is the real life of the method and though the privilege may be accorded the user under certain conditions, the privilege is one that is very apt to be abused. It is a question whether the feeding of anything to bees except honey can be pursued along perfectly legitimate lines. "Diluted sin is not virtue," and if it is a moral right that a little syrup may be stored in the supers to be sold as so much honey the complexion of the case should not be changed when instead of 1 per cent. or 20 per cent. the contents of a package labeled "Honey" were 100 per cent. fed syrup.

Yes, to me, the sectional brood-chamber hive has lost its lustre. The big single story brood-chamber has shown itself to be the fittest of the two and to it I must look for the realization of honey crops.

The objection to handling large frames, so frequently raised, resolves itself into nothing more serious than an imaginary grievance. The big colonies in the big hive are able to take care of themselves to such an extent that the real need of handling the brood-combs is reduced to the minimum. When the fact is appreciated that all handling of the brood-combs for the sole purpose of cutting out queen cells to prevent swarming is simply a travesty on art and science in bee-culture, the large frame loses much of its terrors when it is remembered that a little smoke judiciously used and a little drumming on the hive will so frighten the colony that the queen and the greater number of the workers will quietly run up into an empty super substituted for the purpose and that the whole of them may then be shaken down in front of the hive and the queen caught in less time than the frames of the standard hive can be taken out and replaced in a search for her majesty, the burdensome feature of large frames fast fades away and they thus become easy to wield.

By using the deep-frame hive and the very shallow conjointly the most efficient service possible may be realized from them. The large combs will produce the bees to work with, while the shallow combs may be used both for extracting and for swarms, returning the swarms to the parent hives at the beginning of the fall bloom. This management gives beautiful results. The young queen, feeling the impetus of her advantageous surroundings in the big hive, continues the steady grind around the yearly cycle with the smoothness of clock work. Talk about producing honey cheaper in sectional brood-chamber hives! Why it's all a mistaken idea so far as this neck of the woods is concerned.

BEES MOVING EGGS

I think I have a pretty clear case against the bees this time. One day in June of this year I was looking over the combs in the extracting super of a strong colony to see what progress the bees were making at gathering honey. I had put in a couple of empty frames near the center and at this time the bees had filled them with comb. The center comb was an old one but it was not attached to the bottom bar of the frame. The bees extended the combs in the one, the new part being drone comb, of course. The case of combs had been in the honey-house all winter and when it was given to the bees was placed over a wood-zinc honey-board of the latest design. Now, near the bottom of one of the newly made combs and also in the new strip of comb along the bottom edge of the old one there was quite a sprinkling of good healthy drone brood in different stages of development.

The queen was a good prolific one but there was very little drone comb below. Admitting that there was a possibility of the eggs having been deposited there by a fertile worker, I am inclined to the belief that they were carried up there by the nurse bees out of a desire for drone brood.

What say you, brethren, in answer to this?

Wheelersburg, Ohio, Sept. 10, 1903.

PHACELIA.

(Adrian Getaz.)

According to several apiarists of France and Germany, the phacelia is decidedly one of the best honey producing plants known. A peculiarity of it is that its nectar contains only about 55 per cent. of water, while that from other plants generally has 75 or 80 per cent. The honey is light amber and of excellent flavor. A field of that plant in full bloom is one of the most beautiful sights. The flowers are sky blue.

The phacelia will succeed on almost all kinds of soil, giving of course the largest returns on the best. It takes about four pounds of seed to the acre. The plants begin to blossom about five weeks after the sowing. The blossoms open successively so the blossoming period lasts from five to six weeks, more or less, according to the weather.

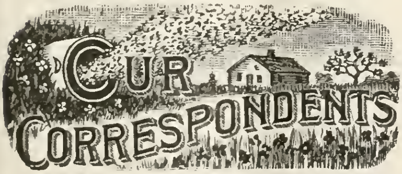
The phacelia can be sown at any time between the early spring and the mid-summer. By successive sowings an uninterrupted yield of honey could be had throughout the summer, except when the weather is too dry. If the phacelia is cut at the beginning of blossoming, or the early part of it, it will grow again and can furnish three or four cuttings during the season.

As hay or green forage, phacelia ranks in quality very near to red clover. It should, however, not be cut later than the middle of the blossoming period, otherwise the stems become too hard. The yield obtained by Mr. Henry (Gazette Apicole) was four tons to the acre of hay, or about four times that amount of green forage when used that way. The yield of seed was 600 pounds to the acre. These experiments were made in the department of Vancluse (France), that is in a section of superior land and good cultivation. I doubt if such results could be obtained by our average farmers.

I spoke here of green forage. In nearly all Europe horses and cows are fed in doors all summer; the green forage is cut and brought to them in the stable. Under the conditions that obtain there it is the best course to follow.

In a preceding communication, I spoke of the sainfoin. I forgot to say that the hay from the sainfoin is of first quality, superior to that from clover or alfalfa. The seed can be bought in this country from all the dealers.

Knoxville, Tenn.



TELL US ALL HOW

Silvara, Pa., Sept. 5, 1903.

W. T. Falconer Co.:

In September number of Bee-Keeper, under heading "Good Season in Illinois," J. E. Johnson makes the following statement: "Up to date, August 20, I have taken 1,700 pounds comb and 300 pounds extracted honey and increased from 12 to 55 swarms."

Now, I have kept bees over 20 years and would like the gentleman to explain his method, so the rest of us way-behind-the-times bee-fellows will be able to keep in sight, at least. In this eastern corner of Bradford county, Pa., to increase from 12 to 55 colonies would ruin the whole batch, to say nothing of surplus honey. A good many things look well on paper. Yes, somethings. We had a fair yield of light honey, but the constant wet weather spoiled the buckwheat crop.

Yours truly,

Z. Cornell.

THE MANGROVE IN CUBA.

Cubanas, Cuba, Aug. 19, 1903.

Dear Mr. Hill: Black mangrove, after all, failed to produce any surplus honey in my new location. During the blooming period we had nice dry weather, and yet the bees got hardly more than a living.

One day in July a neighbor came to me and said that the bees were working on black mangrove. As my bees were beginning to fly more freely, I went to investigate, and found not a single bee on black mangrove; but another large tree, "Patawan," which grows together with the mangrove was full of bees, as it had just begun blooming. The honey came from the mangrove swamp, but not from mangrove. I do not think mangrove is good for honey in the South.

I took extracted 150 gallons, light amber, from Patawan, and took of comb honey 400 pounds. (Nice one). Bees work on Patawan even in the rain, but it does not last very long—three weeks—and weather was bad.

Yours truly, "Pat."

Honey bees have taken possession of the Rocky Run school house, which stands on the borders of the State Sanitarium site near this place.

When the workmen went to the building to make necessary repairs the bees swarmed around the door and it was impossible for any one to enter the place. There are three swarms in the building, and it is believed that a large quantity of honey will be gathered when the bees are got out.—North American.

Glen Gardner, N. J., August 4.

THE Bee-Keeping World

GERMANY.

A certain humorous writer says in a German bee journal that queen bees sometimes suffer with seasickness; particularly the long-tongued varieties are subject to the disease, for after they have endured the voyage they usually have lost the formerly-possessed quality of producing long-tongued workers.

A great deal has been written in past years of "how to obtain and retain prolific and productive bees." Lehzen says in Centralblatt the rule used to be, in order to have good luck with bees to either commence bee-keeping with a strayed-off swarm, a boughten swarm, or one stolen. He advises to buy only strong colonies with fertile young queens of a bee-keeper whose colonies have freely swarmed. In Northern Germany a colony is considered productive when it casts swarms during May or the early part of June and again in buckwheat time or during the heath bloom.

Lehzen thinks in-breeding detrimental to the general prosperity of an apiary, and would not buy bees from an isolated yard on this account. He wants no bees that have been wintered on sugar or have been stimulated with it, as bees are weakened by being obliged to invert so much cane sugar. He considers honey the only proper food for bees, buckwheat honey being the best.

In order to keep the apiary in a prosperous condition he wants combs renewed often. Heath bee-keepers, he says, take no bees into winter with combs older than one year. He also wants queens renewed frequently, advises to keep a number of young queens on hand during the honey season. To prevent in-breeding he would purchase from distant parts young swarms. In the province of Hanover he claims 400,000 swarms are for sale every year, which would answer the purpose perfectly. If it should be found necessary to feed the bees, sugar may be fed in the fall, but never in the spring. Bees should be disturbed as little as possible.

To increase the activity of and the profit from bees, Lehzen advocates moving into buckwheat or heath sections, claiming the moving itself having a beneficial influence upon the bees; he explains this by his observations of bees producing larger quantities of formic acid during the excitement while being moved.

"A good bee-hive ought to meet the requirements of the bees above all things," says C. Peters in Centralblatt. "It should be simple in construction to enable the apiarist to perform his work in the least possible time, and to secure best results from the bees in general. The hive must be suitable for the locality in which it is to be used. Different localities might require different hives."

Maertens says in Centralblatt: The bee journals are full of discussion about scientific questions which neither interest nor benefit the common honey-producer; thinks it is time that practical questions come to the foreground particularly of how best to dispose of the products.

R. Dathe, one of the most noted bee-keepers and manufacturer of hives, said before a bee-keepers' convention, that he obtained from his best hive 37½ pounds of buckwheat comb-honey. A young bee-keeper in Nordholz, to whom he sold a house apiary of 30 colonies, obtained 1,000 pounds of comb honey; the best swarm giving him 50 pounds.

A certain writer says, that among German bee-keepers there will scarcely one be found who is a pronounced non-smoker, and that the tobacco pipe is an indisputable apiarian appliance, so considered.

The Deutsche Ill. Bztg. advises: Never to heat up extracted honey for bottling except when necessary to liquefy it. Alberti says "Honey loses its aroma by the heating process and often the taste is impaired even when great precaution is taken not to overheat."

The great bee-keepers' convention in Strassburg has been pronounced a success. It was well attended although held during a busy time.

For some years a novel little machine for casting and pressing sheats of comb foundation has been manufactured and sold by Rietsche, same is illustrated in Ill. Bztg. As an advantage of this style of comb foundation machine is claimed that wax in its pureness can be used with it, which will insure "no sagging." With other mills it is claimed pure wax cannot well be used. Every bee-keeper may make up his own wax into foundation with this implement.

Roth at the Strassburg convention opposed the use of a large frame in the brood-chamber. Claims brood is reared untimely and it is impractical to remove honey dew from the winter nest as with the large (American) frame the different honeys are all mixed through and cannot be separated. Gunther expressed his ideas on the subject by saying there was no such a thing as best size of frame or hive. Frames and appliances would necessarily have to be varied according to existing conditions.

Straenli writes very enthusiastically in Deutsche Bzcht. of Pratt's method of queen-rearing. (Our German friends are very slowly catching on to our improved methods of rearing queens. —The writer.)

Reidenbach claims in Phalz. Bztg. that honey is often found in the stomach of the drone, from which fact he judges that they are fed with such rather than with chyle by the workers.

EGYPT—GREECE.

About migratory bee-keeping of the ancients, Hoeckelberger says in Phalz. Bztg. "The bee-keepers of Southern Egypt migrated with their bees toward the end of October upon boats to the North where the flowers appeared two months earlier in the season. The boats served at the same time as a house-apiary and dwelling. The boat was moved South gradually, and when the bee-keeper arrived at his home two months later his hives were already full of honey."

The Grecians learned the art of the Egyptians. The little peninsula Attika contained some 20,000 hives of bees and bee-keepers moved their bees to Mount Hymettus which was covered with thyme and produced the celebrated Hymettus honey. It is said bee-keepers came to this honey paradise from all parts of Greece and Solon the wise had ordered at this time, that the different apiaries must not be located any nearer than 100 meters from another. Later bee-keepers even took their bees to all the little islands in order to secure all the honey going to waste there.

The Romans also practiced migratory bee-keeping. They moved south to Tarent, even to Sicily and Kreta.

F.Greiner.

FRANCE.

LONG AND SHORT TONGUES.

Mr. Charton Froissard, in the Gazette Apicole, relates some experiments made on the relation of long tongues to honey surplus. The measurements made do not give the exact length of the tongues, but the depth to which the bees could reach through wire cloth of the apparatus used.

The apparatus was placed in the hive and left until no more honey or syrup could be taken by the bees, and the distance between the wire cloth and the food measured. The experiments gave, for different colonies, from 70 to 93-tenths of milimeters. A remarkable feature of the experiment is that often, the swarms gave longer or shorter lengths than the colonies from which they came. This shows that the drones must have a considerable influence on the worker bees, which are his daughters.

In trying to ascertain the relation between the surplus obtained and the length of tongues, it is necessary to operate on colonies as nearly equal as possible. For this purpose, Mr. Charton Froissard selected eight swarms, of nearly the same weight, issued from the hives at about the same time and therefore under nearly the same conditions as to honey flow, temperature etc.

Five weeks later the swarms were weighed, and the increase in weight, consisting in combs built, brood present, honey, etc. ascertained. The increase in weight varied nearly like the length of tongues. The swarm having the shortest tongue length, 74-tenths of milimeters, having increased but very little in weight, while the one with the greatest length of tongue, 95-tenths of milimeters, had increased 12 pounds.

A correspondent, whose name is not given, says that bees wintered in cellar will consume, per colony, at least 10 pounds of honey during the winter, less than those wintered outside. In the cellar, from six to 16 pounds according to the size of the colony is all that is necessary. In wintering outside, the small colonies consume nearly as much as the large ones, in order to maintain the necessary temperature. He estimates 25 pounds per colony, or about, for outside wintering. A saving of 10 pounds per colony at 10 cents per pound means 100 dollars for an apiary of 100 colonies. That's worth looking after.

ITALY.

Mr. Vincent Asprea says that where he lives, in Southern Italy, the natives secure their swarms in a very simple and easy manner. They take some leaves of the lime tree, (the tree that produces the limes sold in the stores or used at the soda water stands), bruise or mash them, so as to have the odor as strong as possible and put them in the hive or wherever they want the swarm to settle, which it invariably does. This item is from the Rucher Belge, May 1903.

BELGIUM.

Mr. R. Pincot (Rucher Belge) made some comparative experiments between apiaries conducted on the natural swarming plan and those in which anticipated swarming is practiced. He finds that the apiary or rather the part of the apiary) managed on the ordinary anticipated swarming plan gave 70 per cent more surplus per colony than the apiary where natural swarming was allowed. With the method of anticipated swarming by double permutation, the increase is more than 100 per cent. that is the total surplus more than doubles. These figures are somewhat approximative, as it is impossible to divide an apiary so as to have the colonies absolutely of the same strength in each portion.

Sometimes it is difficult to find a queen or cut the queen-cells of a very strong colony, on account of so many bees in the way. Mr. A. Wathelet the editor of the Rucher Belge advises in such cases to remove the hive to a distance, put an empty one on the stand, and visit the hive half an hour or an hour later when the field bees are out. Then return it to its place.

Mr. Debienne, in the Rucher Belge says that during the honey flow the bees ought not to be disturbed if possible. He had two colonies on scales, doing about equally well. One day he visited one thoroughly for some purpose or other. At night the one undisturbed had increased its weight by four pounds more than the one visited.

SWITZERLAND.

A new wrinkle in bee-keeping has been started in Switzerland. Apicultural stations now receive virgin queens from the bee-keepers and return them to their owners after they are fecondated. Of the 367 queens sent, 285 were mated and returned. The others were lost. Needless to say that only drones of the very best stock are used. This item is taken from the Schweitzerishe Bienenzeitung and quoted in the Rucher Belge.

Adrian Getaz.

AUSTRALIA.

The "ringbarking" of nectar-yielding forest trees, which is done in a wholesale way, as a means of improving the sheep pasture, to the great disadvantage of apiarian interests, is strongly objected to by bee-keepers of the island continent.

Mr. Tipper has adopted ruberoid quilts as a winter covering for his hives with very gratifying results.

The Bee Bulletin says, "Chilian honey often arrives in England dirty, dark and of strong flavor, and sells at 3d per pound. This is generally bought by chemists, after proper treatment, and blended with some good-flavored honey is sold as pure English honey at 1s (25 cents) per pound."

President Bolton, of the Victorian Apiarists' Association, regards bee-keeping interests there as improving, under the efforts of the society.

IRELAND.

Says the Irish Bee Journal for September: "Two disastrous seasons in succession are not common, even in such a climate as ours. But, judging from reports to hand from all parts of Ireland, as well as our own experience, we fear that 1903 must be set down as a year even more disappointing to bee-keepers than 1902. * * A similar state of affairs is complained of in England and Scotland, where prominent bee-men declare that the weather has been deplorable, and the surplus honey gathering practically nil. * * The disappointment to bee-keepers has been a serious one. And this, with the rapid spread of foul brood, and the special advantages which the pest enjoys in continued wet weather, are sufficient to justify some alarm."

Considered in connection with that which appears upon the same subject in the editorial department of this issue, the following, from the same splendid journal, by W. Moroney, is not without interest: "Bee paralysis is a disease almost, if not quite as infectious as foul brood. I should like to caution bee-keepers generally against it. Having had it at one time I can speak from experience. At present it is decimating a whole district; and to show how infectious it is, two or three years ago a successful bee-keeper, having a large apiary, was asked to overhaul some stocks suffering from a strange disease. He did so, the consequences being that he carried the infection home. His bees have since died out after all known remedies have been tried, and he is obliged to buy swarms every season to keep up the number of his stocks."

The Irish Bee Journal gives the following statistics, as published by the department of agriculture: The honey produced (in Ireland) in 1901 amounted to 718,218 pounds—extracted, 298,185 pounds, and 420,033 pounds of comb, in sections. In 1891 the total was 253,561 pounds, and the average for the ten years, '91 to 1900, was 371,986 pounds.

H. E. H.

JAMAICA.

Mr. Leslie Alexander, of Malvern, Jamaica, says the Agricultural News, mentions a simple and effective method of branding robber bees. The entire colony that is being robbed is banked with hay which is freely sprinkled with a brush dipped in whitewash containing about a tablespoonful of turpentine. Every robber is branded 'white,' and the bee-keeper can then detect the colony from which the robbers are issuing, when the entrance is forthwith closed. No matter how thickly the hay is placed around a colony, the bees get ample ventilation, and at night the covering may be removed. The whitewashing is, of course, superior to dusting with flour; and, since it saturates the hay, the bees get disgusted as soon as their bodies get foul and sticky, while the smell of the turpentine adds to their disgust.

Mr. Samuel T. Frost, before a meeting of the British Chemists Assistants' Association said:

A great deal of beeswax imported into Britain does not find its way into Mincing Lane, but is shipped direct to the manufacturers or wholesale dealers from Jamaica, Zanibar, Madagascar, New Zealand, Australia, Spain, India, and Morocco. A certain proportion of the wax that is offered for sale in the drug market is grossly adulterated; not artistically so as to require the services of an analyst to detect the adulteration; but with such things as stones, earth and dead leaves, and some of it is very wormy. Like honey, the imported wax varies greatly in color and quality, ranging from white, through all the shades of yellow and brown, to black. Perhaps the article for which there is the greatest demand in the open market is Jamaica wax, which is shipped in barrels, casks, and cases weighing from 2 to 4 cwt., and always finds an unlimited sale in London on account of its undoubted purity. The prices range from £7 10s. to £8 15s. per cwt., and occasionally there is very active competition for it. Its principal uses are for boot and furniture polishes, heel-bail tailors' wax, photographic compositions, etc. The total exports from Jamaica in 1898 were valued at £10,294, against £4,823 in 1888; while the value of the honey exported from Jamaica during the same years was £2,103 against £1,341. The United States has increased her imports of wax from Jamaica while the amount coming to the United Kingdom has decreased. The increased production of wax in Jamaica is very largely due to the intelligent action of the local agricultural societies, backed up by the Imperial Department of Agriculture, in encouraging a better system of apiculture. Jamaica wax varies in color from a nice pale brown and yellow to good red, and pale to dark brown, or chocolate color.—Jamaica Times, Sept. 12, 1903.

BEES FOR POULTRYMEN.

In its crop report for July, the Massachusetts state board of agriculture includes an article on "Bee-Keeping; Its Pleasures and Profits," by Dr. Jas. B. Paige, professor of veterinary science at the Massachusetts Agricultural College. This report may be obtained by application to J. Lewis Ellsworth, secretary of the board, State House, Boston, and those desiring to receive these bulletins regularly may have their names placed on the mailing list.

In this article Dr. Paige says: "Fo ty or fifty years ago nearly every far er kept a few swarms of bees. Th furnished him a healthy article of fo that was considered almost a necessit Today it is the exception that one se about the farmer's home—these pr ducers of the most wholesome and d licious table delicacy it is possible obtain. In addition to the producti of honey, bees perform a valuable s vice by the fertilization and cross f tilization of flowers, the value of whi cannot be estimated."

Dr. Paige then gives the figures fro the twelfth census for the Unit States, the five leading states in t bee industry, and for Massachusett An interesting comparison is that tween Massachusetts and Vermo which shows that with practically t same number of farms, Vermont h 12,836 swarms, valued at $3.58 p swarm, while Massachusetts has on 8,381 hives, which, however, are valu at $4.26 per hive. Much of the V mont honey is sold in Massachuset The situation of our own state is mo favorable for bee-keeping than is th of Vermont, and there seems to be good reason why we should not p duce sufficient honey for home co sumption.

Continuing, he points out that it not well to depend on bee-keeping alo as a source of livelihood, but that should be combined with some oth specialty, such as market gardenin fruit growing, or poultry raising. Dr. Paige's opinion a combination bee-keeping and poultry raising is very desirable one, for the reason th bees are inactive in winter when pou try requires constant attention, whi bees can be most advantageously han led during the middle of the day summer, when poultry requires but tle care. A large farm in a rural di trict is not essential for the successf keeping of bees. They thrive in town villages, and even in large citie Swarms protected from strong win and extreme cold in winter will thri in almost any locality in Massach setts.

Dr. Paige gives advice as to the s lection of varieties of bees, manag ment and selection of hives and app ances. He recommends starting in small way with one or two swarm the natural increase of which wi quickly build up the apiary, while t cessary experience for more extend- operations may be acquired while orking with a few. The cost of start- g an apiary is comparatively small, ing about $15, including swarm of es in hive, bee smoker, veil, and her appliances, all of which will be fficient for conducting the apiary as increases. In selecting hives, one the modern movable frame hives, ith super for surplus honey boxes, ould be used, and the simpler its nstruction the better. All hives in e yard should be alike, so that parts ay be interchanged. Much pleasure ay be had and information gained the study of bees kept in an obser- tion hive.

At the close of the article a list of e best works on bees and bee-keeping given, and mention is made of the urse in bee-keeping to be given at e Massachusetts Agricultural Col- ge, beginning the fourth Wednesday May, and continuing four weeks. he article is illustrated by cuts show- g desirable hives and an excellent lf-tone of a swarm of bees in an ob- rvation hive.—Farm Poultry, Aug.

AT THE WORLD'S FAIR.

The Chinese Imperial Vice-Commis- oner, Wong Kai Kah, arrived in St. ouis from Peking on July 3, and took ossession of the furnished mansion, 385 Goodfellow avenue, which will the residence of himself, his fam- y and his official staff until after the nal closing of the Exposition gates. e brought with him his corps of ser- ants and skilled artizans to put the nishing touches on the Chinese build- g and will begin its construction at ce. He was partly educated in the nited States, has lived here long ough to be familiar with American anners and customs, is an admirable aster of English, and the newspaper porters describe him as most inter- sting and charming. He says this ill be China's first official participa- on in a world's fair, and neither ef- rt nor money will be spared in mak- g it a memorable representation of hinese progress, art and industry.

The collection of the exhibits is pro- ressing rapidly. They will be fully stalled filling the allotted space be- ore the Fair gates open. He is here complete all preparations for installment and also the Chinese building, on the completion of which next January he will return home and escort the Imperial Chief Commissioner, Prince P'u Lun to St. Louis. On July 6 he was waited on with carriages by the representatives of the Committee on Ceremonies, who escorted him and his official staff, dressed in the picturesque official costumes of the Chinese Court to the Administration Building where the first official call was made on President Francis and the Exposition officials. Later the visitors were taken for a drive over the World's Fair Grounds and afterwards to luncheon at the St. Louis Club. Mr. Wong visits the Administration Building almost daily.

Mr. Allen V. Cockrell writes from Washington, D. C.:

"Cuban Minister advises the passage by the Senate of the bill appropriating $80,000 for participation."

Hon. Henry Wade, of Toronto, Ontario, the Registrar of Live Stock for Canada, writes F. D. Coburn, Chief of the Exposition's Department of Live Stock, as follows:

"We are working up a large exhibit for your Exposition next year. Have already waited on Hon. Sydney Fisher, Minister of Agriculture, asking him for a large grant of money, which I hope and expect we will receive."

"Canada made an exhibit of rare excellence at the World's Columbian Exposition of 1893," says Col. C. F. Mills, Secretary of the Live Stock Department, "and in not a few of the classes received the larger portion of the prize money. In addition to the prizes given by the Provincial Government to Canadian exhibitors at Chicago the Columbian management awarded prizes to the breeders of Ontario and Quebec as follows: On cattle, $3,980; horses, $1,305; sheep, $5,200; swine, $1,395; total, $11,880. The prize fund provided for the Live Stock Exhibit at the World's Fair next year will be nearly twice as large as the amount awarded at Chicago in 1893, and the skillful breeders of Canada, of whom there are many, can be depended upon to exhibit stock of such superior quality as to justly entitle them to receive a liberal share of the quarter of a million of dollars set apart by the Louisiana Purchase Exposition for stock shown at St. Louis in 1904."

In a telegram of July 8 to the State Department from Rio Janeiro, Minister Thompson expresses confidence that the Brazillian Congress will vote the appropriation of $600,000 American dollars asked for by the President of Brazil for an exhibit at the Louisiana Purchase Exposition. He finds a most friendly feeling for the United States in the government circles in Brazil, and says the Brazilian exhibit will be under the direction of Dr. Luro Muller, Minister of Industry, Transportation and Public Works.

The Nebraska World's Fair Commission has added $750 to the premiums offered by the Nebraska Improved Corn Growers' Association for World's Fair exhibits of corn. The Commission has also appointed special collectors of forage grasses and sheaf grains, and offers special premiums for the best collections. Private subscriptions to the amount of $25,000 have so far been added to the State appropriation of $35,000 at the disposal of the Committee.

The Gloucester (Mass.) Times reports that Dr. Tarleton H. Bean, Chief of the Department of Fish and Game, visited the city on June 26 and conferred with the president of the Gloucester Board of Trade and its Fishery Committee in regard to the city's representation in the Exposition's Fish Department. The Times says that Gloucester is the largest fishing port in the United States and urges the Board of Trade to see that a reperesntative exhibit be made at St. Louis next year.

Several companies have been organized to take care of visitors to St. Louis during the World's Fair. The newest one is the World's Fair Chautauqua Company, which announces that it will provide visitors with comfortable lodgings near the Exposition gates for two weeks or longer at $1 per day, leaving the board money in their pockets to be expended for meals at the company's table or at adjacent restaurants. A "limited" membership costing $3 entitles the holder to lodging at $1.50 a day. The payment of $11 more in installments secures a full membership, which is transferable at any time before the service is completed. The Germania Trust Co. of St Louis guarantees the repayment of the remittances in case the company fails to render the service. This includes a corps of scientific guides and lecturers who will conduct the lodgers through the wonders of the Exposition I. C. McNeill. President of the Wisconsin State Normal School, is the company's president, and two president of the Missouri State Teachers Association, Ed. D. Luckey and Wm. J. Hawkins, are respectively vice-presiden and secretary.

Mr. Chas. A. Spiess, of Las Vegas New Mexico, President of the New Mexico Commission, visited the Administration Building July 6 and conferred with Director-of-Exhibits Skiff Director-of-Works Taylor and a number of the department chiefs. New Mexico will spend $7,000 of its appropriation, $32,000, on a building. Surrounding the structure will be a cactus garden in which many curious varieties of the plant are to be shown New Mexico will exhibit in all departments. In Mining, a Turquoise min and the gems from it, for which New Mexico is famous, will be shown, and in live stock, a large herd of Hereford will be exhibited.

After visiting California and personally viewing the situation in tha world-renowned land of big honey tanks, sage brush and jack rabbits the editor of the American Bee Journal advises his readers that, "On the whole, taking into account ties o friendship and old associates, as wel as trouble and expense of making a change, the probability is that not one bee-keeper in ten will find himsel better off anywhere in the world than right where he is now."

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Editorial

Writing in the Bee-Keeper's Record, William McNally says: "For the second year in succession Scotch bee-keepers have to be content with a poor crop, which, on striking an average, will, I think, only reach about one-half that of ordinary seasons."

THE DEACON ILL.

The following, received September 21, explains the non-appearance of Deacon Hardscrabble's usual letter in this issue. We all hope the deacon may soon be restored to his usual state of good health:

Dear Bro. Hill:

The Deacon is sick and the Deacon a
saint would be!
But if the Deacon gets well just see
what a saint is he.

Fact is, Harry, I've overdid the lolling and 'twixt that and the wear and tear on my nerves by the sayin's of some o' the boys, I'm clean laid up. Doc. says I need a change, so I'm goin' off on a sea trip, but I reckon the old machine is about wore out. Howsomever, you may see me bob up serenely bye and bye. Till then, au revoir.

John Hardscrabble.

According to the Rocky Mountain Bee Journal, "The honey crop of Colorado, while much better than last year, will not average half a crop for the entire State. The honey, however, is of exceptionally fine quality." The same spicy little journal observes further that "to judge by the quotations that are being sent out, the 'bears' are in control of the Chicago market. Happily, Chicago is not big enough to set the prices for the whole country."

Nearly one hundred bee-keepers were in attendance at the Hamilton County Bee-Keepers' convention September 14, at Cincinnati; and it is reported to have been one of the most successful meetings ever held in the Buckeye State. We are, naturally, gratified to learn that some very kind remarks concerning the American Bee-Keeper were made upon that occasion, for which we desire to express thanks.

Our Kansas City correpondent, as an illustration of the excellence of the honey crop in that vicinity, states: "One of our bee men, who has two apiaries, informs us that he has 35,000 pounds of comb honey in one-pound sections, and bees still at work."

The California crop is estimated at about one-third of the "full" quota.

PRE-INTRODUCTION OF VIRGIN QUEENS.

In Gleanings for September 1, Editor Root gives a method of successively introducing virgin queens, which hastens the process of fertilization where a number are to be mated, as practiced in the Root apiary. Here's the idea:

"Here is a colony that is queenless. Instead of giving it one caged virgin, to be released on the candy plan, he (Mr. Root's apiarist, H .E. H.) gives it two of flying age; but the loose slide protecting the candy is removed, exposing the food in one cage, leaving it in the other cage covered by the slide. The bees will release the queen of the first mentioned. In a day or two she will become fertilized and go to laying. The other virgin is kept caged in the meantime. As soon as queen No. 1 is laying she is taken out, and at the same time the slide covering the candy of the other cage is set back, the bees release queen No. 2. Before that is done, another is put into the hive, caged with the candy protected. Queen No. 2 is accepted and ere long begins to lay. She is removed and the slide of cage No. 3 is set back and another virgin is put in, and so on the cycle proceeds."

This preintroduction idea, it appears, has come as a final solution of one of the difficult problems in apiculture and bids fair to become the popular method with queen breeders of the future. If we mistake not, the honor of its discovery belongs to the versatile "Swarthmore," and the American Bee-Keeper believes it was the first publication to give publicity to the plan, through an article which appeared in its issue of March, 1903.

Though the method practiced by the Root people differs somewhat from the Swarthmore modus operandi, the principle is essentially the same. The Root plan being, perhaps, better adapted to the requirements of the "average" bee-keeper, while the "Swarthmore" method is of the rapid-fire type, and is worthy of the consideration of breeders operating upon an extensive commercial scale.

New England has had one of the poorest honey seasons on record.

THE NATIONAL'S NEW OFFICERS

At the Los Angeles convention of the National Association, President James U. Harris, of the Colorado State Bee-Keepers' Association, was elected to the presidential chair of the National Association, also. Mr. Harris is one of the foremost apiarists of his great home State, and, it is said, is eminently qualified to discharge the duties of the new office, at the head of the National Association. We have pleasure in presenting in this number of The Bee-Keeper an excellent portrait of President-elect Harris, of Grand Junction, Colo.

Mr. C. P. Dadant, of Hamilton, Ill., was elected vice president, while Geo. W. Brodbeck, of Los Angeles, president California National Honey Producers' Association, succeeds Geo. W. York, of Chicago, as secretary for the ensuing year.

Some one predicted several years ago that the "Great West" was to become the producer of the bulk of America's honey crops. If the pace with which the National officiary is moving in that direction is any index of nectar-producing conditions, the prophecy is being more speedily fulfilled than even the prognosticator anticipated. However, it is gratifying to note that the management of the National's affairs is passing exclusively into the hands of active producers of honey. Bee-keepers themselves, perhaps, know better than any one else what they want. A thorough knowledge of parliamentary law is by no means the chief essential in meeting the present demands of the industry; and it is a gratifying sign of the times to see the responsibilities of our associations passing into the hands of the man with the smoker—the man whose personal experiences have deeply impressed him with the importance of action upon urgent and practical questions, as well as familiarized him with the details and intricacies involved in surmounting the problems which loom up before him as a menace to his means of livelihood.

The Buffalo market is now considered safe for small shipments, by our correspondent there, who states that low grades of new crop are selling at from eight to twelve cents.

Mr. and Mrs. L. K. Smith (Mrs. S. A. Smith) of Grant, Fla., constitute a harmonious and eminently successful honey-producing company of considerable proportions, and it has been the pleasure of the Bee-Keeper editor to meet and enjoy a brief discussion of things apiarian with these progressive people, as they passed recently through Fort Pierce, on pleasure bent, aboard their boat. We all have our favorite themes and pet hobbies, and that of Mrs. Smith is a most worthy one—means by which the producer of honey may reap a more commensurate reward for his labor. By careful, expert handling of the crops, and consequent excellence of the goods, Mrs. Smith has developed a home demand for extracted honey that is almost phenomenal, when the sparsely populated condition of the country is taken into consideration; and it is a noteworthy fact that with the advancing of the price of honey the sales have increased. People often prefer to buy articles of food at a wholesome price, as the cost is primarily considered an index of quality. Mrs. Smith is evidently an apt student of human nature, and upon the foregoing assumption put up the price of choice honey to meet the tastes of a fastidious public, and with gratifying success. Mrs. Smith avers that the prevalent custom of shipping the crop hurriedly to the city dealer, at low prices, is one which reacts to the detriment of the general business, by establishing permanently a standard of values which the future efforts of bee-keepers may not easily overcome. Unfortunately for himself, the writer was "up to his eyes" in pineapple planting at the time of Mr. and Mrs. Smith's visit to Fort Pierce, and was therefore unable to avail himself of the pleasure of a real bee-keepers' convention with such progressive bee-keepers—a thing to which he looks forward as a future possibility, with pleasant anticipations.

The American Bee-Keeper has for years been alert to discover among its constantly increasing list of readers, new and competent writers—those who possess the faculty of writing entertainingly upon instructive or interesting apiarian subjects. We cordially invite every present reader to assist the editor in his efforts to make The Bee-Keeper the most interesting bee journal on earth. Items of interest are solicited from all; and as an incentive to take a hand, we will send The Florida Magazine free one year to one, two or three writers each month, as an expression of our appreciation of their interest. We cannot undertake to return all articles which fail to merit this premium, and all matter submitted must necessarily become our own. However, it is quite likely that most competing letters will be awarded a year's subscription, as stated, and we hopefully anticipate a generous response. The "Magazine" is an excellent 84-page, clean, wholesome family magazine, devoted largely to text and beautiful pictures of "The Land of Flowers." Where are the Hutchinsons, Heddons, Doolittles, Dadants, Millers, Martins, Clarks, etc., etc,, of the rising generation? The American Bee-Keeper is scanning the apicultural horizon. We want some of the new ones with us. Who are they? Where are they?

General Manager N. E. France, Platteville, Wis., of the National Bee-Keepers' Association, requests us to announce to members that if any have failed to receive his list of questions, supplied on a special blank for the purpose of enabling him to compile for their benefit valuable information in his forthcoming annual report, a postal card request will bring it promptly; and all are requested to assist in the matter. Also, any who would care for one of the "National" badges, and have not received one, may have it by simply asking, at the same time.

The Bee-Keeper's Chicago correspondent advises that "honey is coming to market quite freely, and is of first quality. This fact induces the trade to take it, and people are of the opinion that it is going to be reasonable in price—two factors which go far towards marketing the product."

An unprecedented demand for sample copies, together with a wholesome influx of new subscriptions during the past month, has completely exhausted our September edition.

CAUSE OF BEE PARALYSIS.

The "Cause of Bee Paralysis" is explained by Mr. E. J. Atchley, in a recent issue of Gleanings. The theory is, in substance, as follows:

The nurse bees, in accordance with a natural law, secrete or prepare quantities of chyle with which to nourish the larvae; doing so at a time when there is little or no larvae, in the hive upon which to bestow the food, which is necessarily retained, and undergoes a state of fermentation, thus causing the sickness known as paralysis. The severity of the case, Mr. Atchley says, will be proportionate to the extent of the chyle secreted. He has also observed that Cyprian and Holy Land bees are quite or nearly exempt from the disease, and for this peculiarity he accounts in this wise: "These bees are such great breeders that the queens begin laying at the least excitement, in season or out of season, and furnish plenty of larvae upon which the bees can use the prepared food, and consequently they are always healthy."

This is an interesting observation, and all such investigation should be encouraged. The theory is indeed one that evinces much careful attention to the matter upon Mr. Atchley's part. However, it is difficult to comprehend the reason for the action of an external application of sulphur, if the cause of the disease is internal; and the efficacy of the sulphur application has been established beyond question.

Again, while Mr. Atchley's Cyprians and Holy Lands may have failed to contract the malady, let not the inexperienced reader take it for granted that they are therefore necessarily exempt or immune. Some of the worst cases of paralysis that have come before the writer's attention were in Cyprian colonies, and that during a honey-flow, with an abundance of brood of all stages in the hives.

In connection with Mr. Atchley's observation, as to the lack of brood being responsible for the malady, it is interesting to note the theory of Mr. Beuhne, as presented at the convention of Victorian bee-keepers, of Australia, last June, and reported by the Aust. Bee Bulletin, as follows:

"Queen raisers pay too much attention to the amount of brood contained in the hive. It was a mistake to take a too prolific queen. Paralysis was due where queens were bred from too prolific mothers. Bees from such queens have a great tendency to paralysis. Breed from moderately prolific queens. He had adhered to that rule for several seasons and paralysis had disappeared."

Such directly opposite views from two investigators render the "cause" proposition more complex than ever.

In connection with the picture which appears in this number of The Bee-Keeper, showing Mr. Herman holding "A Nice Swarm," the editor is inclined to relate an amusing incident: Our engraver in Albany, N. Y., has a habit of itemizing his bills in a way that each engraving is readily recognized. He will, for example, note one cut, "Portrait," another, "bee-boxes," another "bee-comb," etc., etc. The last bill presented, among other things, "Man with rooster." We were at a loss for a time to identify the item, but finally recognized the "rooster."

In apiarian nomenclature, "Honey-harvest" and "Robbing" are synonymous words. The former is enjoyed by the progressive apiarist, while the latter method is pursued by the non-reading fellow.

The American Bee-Keeper is in the market to buy bee-keeping articles. Those illustrated with good photographs are especially desired.

Mr. A. E. Manum, Bristol, Vt., is now entirely out of the bee business. It is difficult to think "Manum" without at the same time thinking "bees."

General Manager France, of the "National," has scented a hot trail of honey adulterators, and is in determined pursuit.

If "chunk honey" fails to become popular in the world's markets, no one can charge the failure against H. H. Hyde.

There is a grand opportunity in the field for adverttising for every man of superior ability.—Printers' Ink.

From the scenic mountains of Switzerland, dated September 3, comes to The Bee-Keeper a beautiful souvenir postal card, bearing the information, "Honey for breakfast on all European tables. It is of very heavy body, color and flavor," and was mailed at Luzerne by our esteemed friend and contributor, Mr. W. S. Hart, who is sojourning in that world-renowned land of picturesque grandeur.

Through the kindness of Mrs. Sarah A Smith, Grant, Fla., we have received a new and excellent bee-brush. It is made of a vegetable, grass-like fibre, which, though not too harsh, as we think is the case with the ordinary broom corn, possesses a quality of "action" so desirable in dislodging bees from the comb. We may have an opportunity to present an illustration of this new tool in an early issue.

The Jamaica Bee-Keepers' Association conducts an aparian department in the Jamaica Times (Kingston), its official organ. A recent issue reproduced a dozen or so items from the American Bee-Keeper, one of which was credited. This is encouraging, and we desire to express our appreciation of Editor McHardy's kindness in crediting even one. Jamaica is progressing.

Subscriptions received during the past month indicate to a gratifying extent the increasing popularity of The Bee-Keeper, as they come not only from every quarter of our own continent, the West Indies and Central America, but include bee-keepers from northern Europe to Tasmania, in the South Pacific.

Vice President-elect C. P. Dadant, of the National, says the Los Angeles meeting represented more bees than any convention previously held by the association. "We of the East are small bee-keepers, by the side of the California men," says Mr. D.

Mr. Harry Griffin, of Central Virginia, regards about twenty pounds of comb honey as the general average crop, per colony in that country, though thirty to thirty-five pounds of extracted may be secured.

The subscription price of the Florida Magazine is $1.00 a year; but we have completed arrangements with the publisher whereby we are enabled to offer our readers both the Florida Magazine and the American Bee-Keeper for only one dollar, if the subscription is sent to our Falconer, N. Y., office.

A recent letter from Mr. A. C. Miller, Providence, R. I., states that they are having an unprecedented fall flow of honey. All hives are filling up nicely and breeding progressing as it does usually in June.

HONEY AND BEESWAX MARKET.

WASHINGTON GRADING RULES.

Fancy.—All sections to be well filled, combs straight, of even thickness and firmly attached to all four sides; both wood and comb unsoiled by travel stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy white," "No. 1, dark," etc.

Chicago, Sept. 8.—Best grades of white comb honey sell at about 14c per lb. Extracted 6½ to 7½c, according to quality and package. Amber grades, 5½ to 6½c. Beeswax, 30c.
R. A. Burnett & Co.

Buffalo, N. Y., Sept. 8.—The demand for No. 1 comb is improving. Supply moderate. We quote, fancy 14 to 15c; extracted, 6 to 8c. Beeswax is in light supply and wanted at 30 to 32c for fancy. Batterson & Co.

Kansas City, Mo., Sept. 9.—The demand for honey is light, with good supply. We quote, white comb, 12 1-2 to 14c. Dark, 11; extracted, 5 1-2 to 7c. Beeswax, in good demand, with supply light, at 30c.

Cincinnati, O., Aug. 6.—The supply of extracted honey about equals the demand. We are selling amber, in barrels, 5½ to 6½c, according to quality. White clover, in barrels and cans, 7 and 8½c respectively. Comb honey (Fancy) in no-drip shipping cases, 16 to 16½c. Beeswax, 30c.—The Fred W. Muth Company.

MODERN ELOQUENCE

THOMAS B. REED
Editor-in-Chief

For the first time the best After-dinner Speeches, Lectures, Addresses, Anecdotes, Reminiscences and Repartee of America's and England's most brilliant men have been selected, edited, arranged, by an editorial board of men—themselves eloquent with word and pen—men who have attained eminence in varied fields of activity. *These gems of spoken thought* were fugitive, from lack of proper preservative means, until the Hon. Thomas B. Reed, upon voluntarily retiring from the Speakership of the House of Representatives, gathered about him these men of mark and experience in literature, his friends and co-workers in other fields, and began the task of preparing this great work.

North, East, South and West and the Mother Country as well, have been searched for gems in every field of eloquence.

Here was a lecture that had wrought upon the very souls of great audiences; there an after-dinner speech, which "between the lines" was freighted with the destinies of nations. Here was an eulogy expressing in a few but virile words the love, the honor, and the tears of millions, and there an address pregnant with force—itself the fruit of a strenuous life's work. Or, perchance, a reminiscence, keen, scintillant repartee, or a story potent in significance and aflame with human interest. Matter there was in abundance, for English-speaking peoples are eloquent, but *the best—only the best, only the great, the brilliant, the worthy to endure*—has been the guiding rule of Mr. Reed and his colleagues. Their editorial labors have been immense.

Whatever the viewpoint, this work is without precedent. It has no predecessor, no competitor. Speeches that have been flashed across continents, lectures that have been repeated over and over again to never-tiring audiences (but never published), addresses that have made famous the man, the time and the place—these are brought together for the first time, and with them a large number of the wittiest sayings of the wittiest men of the Nineteenth Century.

For an hour—for a whole evening in the easy chair at home—for the study of style and diction that have electrified brilliant assemblies—for the man ambitious to become a successful or popular public speaker, and for the one who has to prepare a toast or an address—this work is a never-failing source of entertainment and inspiration. Nor is this solely "a man's work."

"The tenderest tribute to woman I have ever read," said Senator Dolivar when he read the manuscript of Joseph Choate's after-dinner speech—"The Pilgrim Mothers."

A Fine Portfolio Mailed Free

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Gentlemen: Referring to your advertisement of Hon. Thos. B. Reed's library of Modern Eloquence, I shall be pleased to receive portfolio of sample pages, photogravures and chromatic plates; also full particulars regarding bindings, prices, etc.

NAME..

MAIL ADDRESS..

[A-127]..

Queen-Breeders' Directory.

This page is intended as a guide for queen buyers, from which they may select the stock desired, and breeders are invited to make use of it for their announcements, at the rate of $3.00 a year per card, payable strictly in advance.

THE A. I. ROOT CO., MEDINA, OHIO. Breeders of Italian bees and queens.

GEO. J. VANDE VORD, DAYTONA, FLA. Breeds choice Italian queens early. All queens warranted purely mated, and satisfaction guaranteed.

C. H. W. WEBER, CINCINNATI, OHIO. (Cor. Central and Freeman Aves.) Golden yellow, Red Clover and Carniolan queens, bred from select mothers in separate apiaries.

THE HONEY AND BEE COMPANY, BEEVILLE, TEXAS. Holy Land, Carniolan, Cyprian, Albino and 3 and 5-banded Italian queens. Write for our low prices. Satisfaction guaranteed..

JOHN M. DAVIS, SPRING HILL, TENN., sends out the choicest 3-banded and golden Italian queens that skill and experience can produce. Satisfaction guaranteed. No disease.

J. B. CHASE, PORT ORANGE, FLA., has fine golden Italian queens early and late. Workers little inclined to swarm, and cap their honey very white. Hundreds of his old customers stick to him year after year. Circular free.

SWARTHMORE APIARIES, SWARTHMORE, PA. Our bees and queens are the brighest Italians procurable. Satisfaction guaranteed. Correspondence in English, French, German and Spanish. Shipments to all parts of the world.

W. Z. HUTCHINSON, FLINT, MICH. Superior stock queens, $1.50 each; queen and Bee-Keepers' Review one year for only $2.00.

NEW CENTURY QUEEN-REARING CO., (John W. Pharr, Prop.) BERCLAIR, TEXAS, is breeding fine golden and 3-banded Itailian, Holy Land, Carniolan and Cyprian queens. Prices are low. Please write for special information desired.

THIS SPACE FOR SALE—$3.00 A YEAR.

Cent-a-Word Column.

The rate is uniformly one cent for each word, each month; no advertisement however small will be accepted for less than twenty cents, and must be paid in advance. Count the words and remit with order accordingly.

FOR SALE.—1280 acres Timber Land; plenty of water; fine for an extensive Bee Ranch. Season June to November. Address William Smith, Cameron, Kern County, Calif.

WILL SELL half interest in my apiary, pineapple and orange plantation. Good apiarist will have exclusive charge. D. DALY, La Gloria, Cuba. 8-2t

WANTED—To exchange six-month trial subscription to The American Bee-Keeper for 20 cents in postage stamps. Address, Bee-Keeper, Falconer, N. Y.

FOR SALE—A Hawkeye, Jr. Camera Complete. Uses both film and plates. Cost $8.00 will sell with leather case for $3.50 cash. Address Empire Washer Co., Falconer, N. Y.

A TANDEM BICYCLE (for man and lady) cost $150, in first-class condition, was built to order for the owner. Tires new. Will sell for $25 cash. Satisfaction guaranteed. Address J. Clayborne Merrill, 130 Lakeview ave., Jamestown, N. Y.

AGENTS WANTED to sell advertising novelties, good commission allowed. Send for catalogue and terms. American Manufacturing Concern, Jamestown, N. Y.

A correspondent suggests that Pope must have had personal experience in attempting to unite complaining bee-keepers for their own good, that he should have written:

"Show me one that has it in his power
To act consistent with himself an hour."

The sumac flow, so it is reported, spoiled the quality of the white honey crop for some of the Western New York producers this season.

The more you advertise your business the more business you will have to advertise.—Printers Ink.

When writng to advertisers mention The American Bee-Keeper.

People don't care for hard luck stories—make your advertisement happy. —White's Sayings

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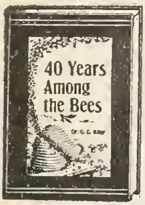

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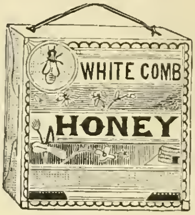

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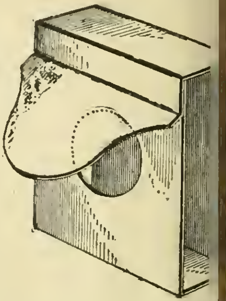

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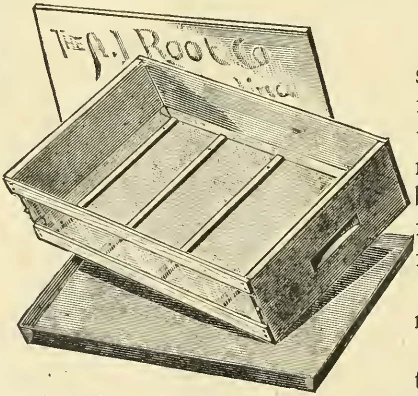
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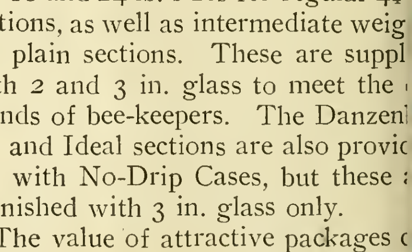

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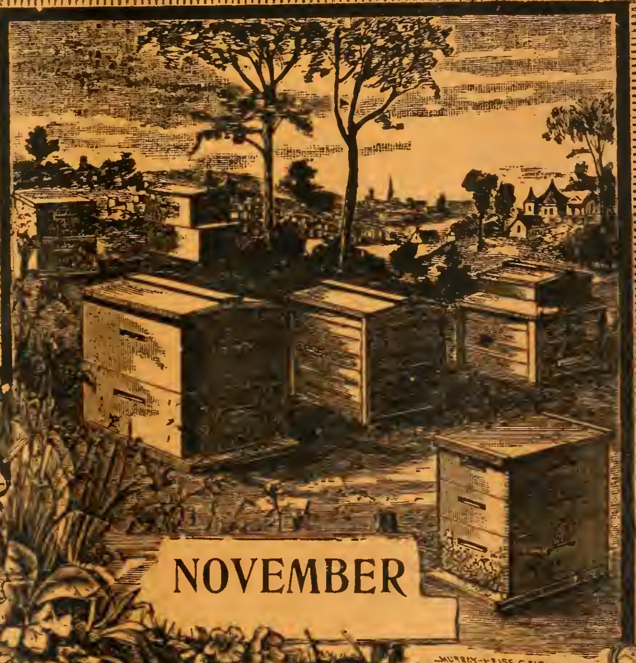

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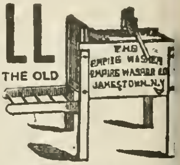

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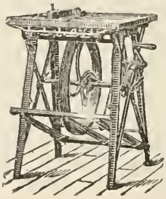

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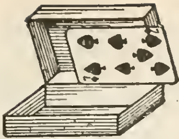

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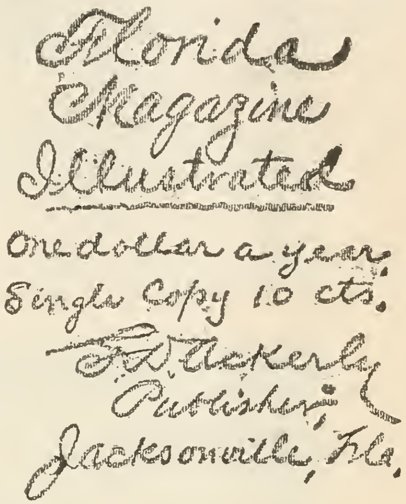

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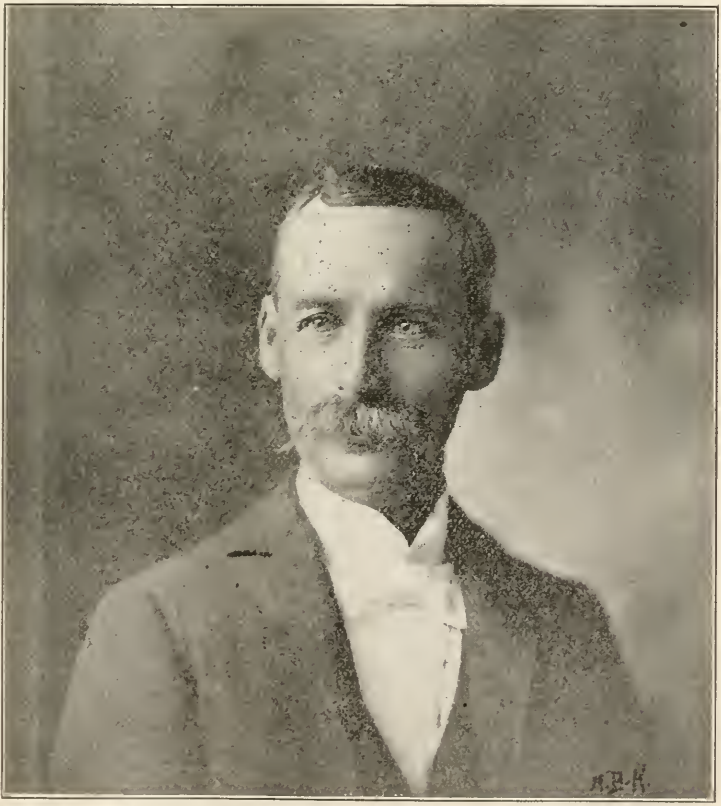
Vol. XIII NOVEMBER, 1903 No. 11



GEO W. BRODBECK, LOS ANGELES, CALIF., SECRETARY-ELECT OF THE NATIONAL BEE-KEEPERS' ASSOCIATION

MATING IN CONFINEMENT.

Broad-Guage Plans for Experimenting Projected by the University of Pennsylvania

(M. F. Reeve).

THE Botanical session of the University of Pennsylvania in its investigation of the flora of the United States is about to begin a movement which will be far-reaching and of particular interest to the American bee-keeper.

Two of the professors have become interested in the subject of bee-keeping through a series of experiments, in which the noted expert queen-breeder, Mr. Pratt, of Swathmore, took an active part, relative to the mating of queens in confinement.

These experiments have been carried along quietly for several months in a building which had been put up for temporary biological experiments on the University grounds.

The professors who aided in the breeding tests propose to follow up the honey flow from one State to another throughout the country, beginning with the earliest, and obtaining through correspondence or by personal visits, samples of all the plants, grasses, trees and shrubs from which nectar is gathered by the honey bee, together with the time when the flower or blossoms expand. In this way a vast amount of important data is expected to be accumulated for investigation and publication. The work, it is said, will not take in Cuba, Porto Rico or the new possessions in the Sandwich Islands and the Philippines.

The men who will undertake the work are expert scientists.

The experiments in the fertilization of queens in confinement were partly the outcome of the investigations of one of the professors who had taken up the question of parthenogenesis in connection with the life history of plant lice. From this he became interested in the life of the honey bee and with the able assistance of Mr. Pratt, who has also been a student of entomology from boyhood, the experiments in fertilization were begun.

Mr. Pratt is convinced that within a short time he will have conquered the problem on which he has been at work for many months of securing the fertilization of queens under restraint, and that he has succeeded in discovering that the true fabric for making the tents or shelters is close cotton cloth and not wire cloth. He says he finds his queens used in his experiments take kindly and naturally to such quarters and that it is only a question of erecting one of a suitable height to secure perfect results and in that way attain the desired point of breeding from choice selected drones.

Vice President Flower, of the Philadelphia Bee-Keepers' Association, has also been experimenting for two years or so along somewhat similar lines, and claims success in a few instances. Mr. Pratt goes in for a different construction altogether, believing he is going closer to nature.

Rutledge, Pa., Sept. 16, 1903.

FORMALIN GAS.

Some Opinions of a Bee-Keeping Student of Science, in Regard to Foul Brood Treatment by the New Process.

(J. E. Johnson).

WE SEE of late considerable enthusiasm manifested in the different bee journals concerning formalin as a cure for foul brood. Editorials in Gleanings report several cases that were treated with formalin in which the bee-keeper was unsuccessful; but that proves nothing, except that we should not depend on this method of treatment until it is better understood.

However, I believe with Dr. Miller, that we should continue to investigate. I believe every State inspector should experiment with cultures and gas treatment. I think I am safe in saying that one application of any gas will not kill spores in all stages of development, especially dried spores.

Bacteriology is a great study. I am far from being able to comprehend it all, but after much research I have been able to get quite a collection of the best works on the subject, and will give my views, as best I can, with what light I have. If any one wishes to criticise do so, but be sure you give us something better.

Now the idea seems to prevail that anything strong enough to kill bacilli would kill all animal life, but such is not the case. All bacilli are of vegetable life, and entirely different from animal life. You may disinfect a sick room to a certain extent by merely sprinkling carbolic acid about on the floor, which will actually kill many bacilli and prevent propagation to a certain extent, and not result injuriously to even a weak patient. If you burn sulphur in a beehive containing both foul brood germs and live bees you will kill both bees and germs—in fact, the bees will die much sooner than the germs, but not from the same cause. The bees would die of suffocation, while the germs would die of formic acid, and it would require at least 30 to 60 minutes to kill even non-sporing bacteria. The formation does not kill germs by the odor or suffocation, but because, when in the air, it oxidizes into formic acid. The bacilli are not so hard to kill, except for the resistance of the capsule or shell. Moisture is very necessary to enable either gas or heat to penetrate through this shell; but with sufficient moisture, and at a temperature of about 98 degrees F., formalin would soon kill all bacilli. But right here is the important question. The spores when dry are almost indestructible, except by fire.

Koch, who is often quoted as authority on bacteria, gives figures thus: Moist heat at 212 degrees F. for 15 minutes would equal dry heat at 284 degrees for three hours in killing bacilli or spores.

Now honey is very dense and I doubt very much if this gas would penetrate through even a thin layer of honey and kill either bacilli or their spores in the bottom of a cell containing honey, but the capping over brood is porous and I feel certain the formalin will penetrate all through brood comb filled with brood but containing no honey.

Furthermore I think I am safe in saying that combs that are thoroughly rotten with foul brood, if empty of honey, would be easier disinfected than dry combs full of dried-up scales and dormant spores, unless the gas is moist enough to soften the shell. One thing more: It is very necessary to have combs warm, about 98 degrees F. Also it is necessary to continue this gas for some time in order to, as it were, manufacture this formic acid by oxidation and so that same acid may have time to penetrate the capsule or shell of the bacillus and spore.

Another plan is this: By keeping combs moist and in right temperature (about 98 degrees F) the spores would be in active reproduction, hence easier killed. The question is not that the life of either bacilli or spores can stand the gas treatment, but the shell must be penetrated and moisture is the agent necessary. A very weak solution would kill both bacilli and spores if it were not for the resistance of the capsule. Sunlight is one of the best bactericides known and if a foul brood infected comb be fully exposed to direct sun rays for a few days millions of germs would be destroyed, but not the spores.

There has been considerable confusion in regard to the terms formalin and formaldehyde. Following is what Prof. George Newman, of Kings College, London, says of it: "Formalin is a 40 per cent. solution of formaldehyde in water, a gas discovered by Hofmann in 1869. This gas is produced by imperfect oxidation of methyl alcohol and may be obtained by passing vapor of methyl alcohol mixed with air over a glowing platinum wire or other heated metals, such as copper and silver. It is the simplest of a series of aldehydes, the highest of which is palmitic aldehyde. Its formula is C H 2 O. It is readily soluble in water, and in the air oxidizes into formic acid (C H 2 O 2). This latter substance occurs in the stings of bees, wasps, nettles and various poisonous animal secretions. Formalin is a strong bactericide even in diluted solutions, and is, of course, volatile. A solution of one to ten thousand is said to be able to destroy the bacilli of typhoid, cholera and anthrax. When formalin is evaporated down, a white residue is left known as paraform. In lozenge form this latter body is used by combustion of methyl spirit to produce gas. Hence we have three common forms of the same thing, formalin, formic aldehyde and paraform, each of which yields formic acid and thus disinfects. The vapor cannot in practice be generated from the formalin as readily as from the paraform.

Now as to its penetrating power. Professor Delepine recommends formaldehyde as being more penetrating than any other gas disinfectant. Both honey and pollen contain air, and it is possible the gas might penetrate to the bottom of a cell of honey if given time but spores, either in this honey or in dry, empty comb, that requires 248 degrees F. dry heat for three hours to kill, would hardly, I think, be destroyed by a few hours' treatment of formalin. But if combs are moist and of right temperature so that active reproduction is in progress, there is no doubt whatever that formalin would be a sure and positive disinfectant; and that it would kill all bacilli and spores if the gas was retained for say, 24 hours. I hope our state foul brood inspectors will experiment with the mode of treating foul brood. It ought not to be very hard to get cultures for experiment.

Williamsfield, Ill., Oct. 10.

PRODUCING COMB HONEY.

Details of Various Methods and Appliances, With Results.

(E. F. Atwater.)

DURING the past season five of our apiaries were run in part for comb honey, and, as the extensive production of comb honey was comparatively new to me, several methods of management were thoroughly tested.

Our colonies in the above yards were in 8 frame L hives, mostly dovetailed and Heddon hives. The 16 shallow frames of the latter being equal in comb capacity to ten of the L. Many colonies in 8-frame L hives had been wintered with a Heddon case on top, with abundant stores, giving a breeding capacity of 13 L frames; while a number of others were wintered in 2-story 8-frame L hives. During the spring breeding period all seemed to fare about the same, until the 2-story L hives had one 8-frame body full of brood. Then there was a very marked reluctance to carry the brood-nest down into the lower story, for, please note, with the regular thick top-bar frames, they must first pass a 1-4 inch bottom-bar, a 3-8 inch bee-space, and a 7-8 inch top-bar, a total distance of 1 1-2 inches, before coming to the combs below; and if, as is often the case, the combs of the upper hive are not built down to the bottom-bars, then the total distance which must be crossed and warmed, covered by the cluster, will be about two inches.

No wonder that many colonies refused to rear brood below, when left in that condition. They stored some honey and a great deal of pollen below.

To remedy this condition one or more frames of brood were put below. When so treated many of them increased so as to fill the 2-story hive with brood and stores at the opening of the first flow from alfalfa.

The colonies in 1 1-2 story hives showed less reluctance in crossing to the lower story as the upper case (Heddon) was of such limited capacity that the cluster covered the upper parts of some of the combs in the lower story. The colonies in the Heddon hives were given a third case of combs as soon as needed and most of these upper cases were soon occupied with brood, as the space between the two sets of combs is only: top-bar, 1-4 inch; bee-space, 1-4 inch; bottom-bar, 1-4 inch, or a total of 3-4 of an inch. The combs of the Heddon hives fill the frames completely after one inversion, or after being used as the upper case of a 2-story hive, during a good flow.

At the opening of the first flow from alfalfa the colonies were treated as follows:

First. Reduced to one 8-frame L hive, full of brood, with necessary comb honey supers. When queen cells were formed, forced swarms were made on starters, full sheets of foundation, or full combs.

Second. Treated on the Aikin plan, of having sealed brood only on the old stand, in a contracted brood-nest, with a ripe queen cell, and comb honey supers.

Third. The Barber plan. The story, shallow or deep, containing the least brood, was put above a comb honey super, and either left there or taken off soon after. We used about 150 supers of tall 4x5 plain sections, 10 supers for square plain sections, 10 T supers with part tin and part wood separators; about 25 single-tier with frame supers for square bee-way sections, and the balance the regular section-holder supers for square bee-way sections.

As to results:

1. Strong forced swarms on starters in no case offered to swarm again, while a few on full sheets of founda-

tion, or on full combs prepared to swarm. Without an exact record I could see no difference in results, except that swarming was more certainly controlled by hiving on starters, but to offset this, a little drone comb was built.

2. The Aikin method gave satisfactory results with a minimum of labor, except in those cases (rather too numerous) where the queen cell failed to hatch, or the queens were lost before they began laying. I shall try to remedy this, in part, by giving a virgin in place of a cell.

3. The Barber plan: Colonies so started were very slow to begin work in the sections, loafed and prepared to swarm and had to be shaken or unqueened. Where the extracting super was taken off soon after the bees began work, the results were a little better, but, as the Barber method does not control swarming (in fact, often induces it, as any brood, above the sections, is almost sure to have queen-cells started on it) I shall make but little use of it in the future. Sections were also stained and discolored, and dark combs built in almost every case, due, no doubt, to the old combs.

In regard to the styles of sections and supers, really there was very little difference in either quantity or quality of the comb honey secured, though the plain sections are easier to scrape and cheaper. Burr combs were frequently attached to fences or wood separators and comb surfaces, though none of the usually accepted causes of such work seemed to be present. The tin separators were remarkably free from such comb connections. The wide frame supers produced the cleanest sections, but required a little more time in manipulation, nor can they be so easily and rapidly inspected. I shall use more T supers.

Forced swarms were hived in 8-frame L hives, shallow Heddon hives, and a hive only slightly shallower than the Danzy with results slightly in favor of the shallow hives, though they usually need some help in the way of winter stores. Even the shallow hives failed, in most cases, to keep the brood to the top-bars during the honey flow, while before the flow there was no difficulty in getting brood to the top bars of the L frames.

After the experience of this and past seasons, I am satisfied that most of the changes made in hives and fixtures are, to say the least, ill advised.

Boise, Idaho, Sept. 21, 1903.

THE "FLORIDA" BEE BRUSH.

Something of the History, and Circumstances Which Led to the Discovery of a New Apiarian Tool that Has Elicited Much Favorable Comment.

(Mrs. Sarah A. Smith.)

IN MY bee-keeping life two of the most disagreeable things I have met with in my work have been, 1st. The lack of something with which to brush bees from their combs, and, 2nd. Short-eared frames.

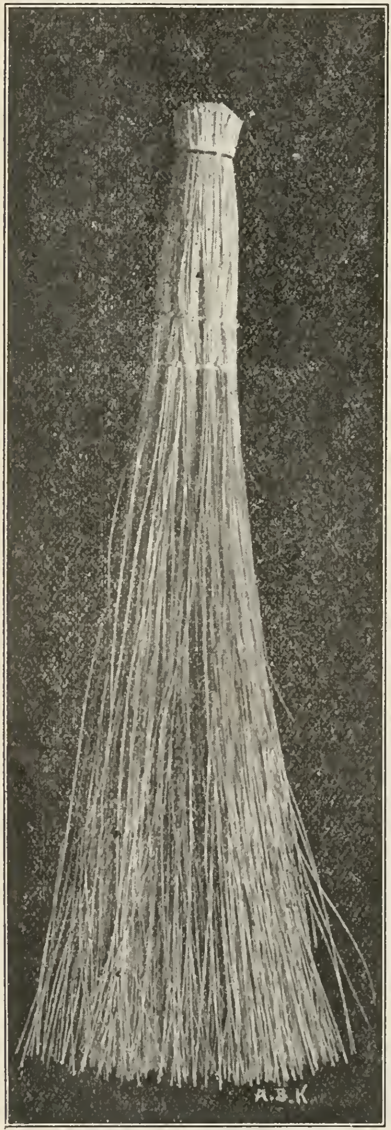
In reading my bee journals I have always been on the lookout to learn how others did the work. Dr. Miller's plan of hitting the top with his fist was tried and, with me, found wanting; because my fist did not have enough power. I also shook the frame with a good quick jerk. If the bees were old, most of them came off as did also a great deal of unsealed honey; but if they were young, they nearly all remained. Besides it was very hard work for me, as I have very little strength.

I read about Dr. Miller's handful of grass, but our grass is not as nice to pull a handful, as that in the North. Weeds also had their turn, and in my home apiary there was one kind that I could use, but in the other four places there was nothing I could pull up or break off, and, being a woman, I never carry a knife. Sometimes the other member of the firm would ask if there was anything he could do to help. The answer was sure to be: "Do cut me something to use for a brush." I know I have wasted more time, and, what is more valuable, patience, in trying to get the bees from their combs than in any other way.

I had a Coggshall brush, but, like other people, have found it too stiff, and it caught and crippled too many bees.

My idea about handling bees right is to kill, and what is worse, cripple just as few as possible. I have taken the crossest of bees and in a short time could handle them without a sting. In the beginning they would just boil out of their hive and come for me as soon as the hive was opened, but soon they truly seemed glad to see me; and I think it was because they did not have to carry off the dead, for an hour or so every time I visited them. You will guess that about this time bee brushes became a hobby with me.

In time I tried the rope brush, a new paint brush, pine needles and saw and cabbage palmetto. The two latter were quite good, if one had used them through a "mosquito season," and thus worn off their roughness.



THE FLORIDA BEE BRUSH.

I kept telling myself and rest of the family that some day I would find what I was looking for, provided I lived long enough. I was working in my home apiary one day just after the grass had been hoed, and as usual, needed a brush. I picked up a bunch of grass and had —my brush. Then I felt very cheap, for it had been before my eyes all the time, but too tough to pull a handful, a la Dr. Miller.

I made myself one, by sewing and tying, and have it yet. That was two years ago, and I can truthfully say that it is the best I have ever found. I do not brush with the end, but the side. No bees are hurt in any way. If it becomes daubed with honey I dip it in water, shake, and it is ready for use once more.

By brushing fast the brush has quite a spring and the momentum seems to assist the work.

Some seem to think they are too long, but by having them that way the bees do not seem to associate one's hand with the cause that is making them so much trouble and therefore they do not sting so badly.

I have named the brush the "Florida" Nos. 1 and 2, and I do hope every bee-keeper who uses it will say, "Eureka," as I did.

This may seem to some a great deal to say about such a trivial affair, but it is the want of such small things that makes our work produce wrinkles, scowls and bad words, and the possession of which makes us smile and say, "Ours is the only really enjoyable profession known."

As I saw by all the bee journals that other bee-keepers have had the same trouble as myself, I thought I would place the "Florida" brush on the market, and combine their making with my bee work. I hope every one who sees them will find them as useful as I have done.

Grant, Fla., Oct. 8, 1903.

Bewailing the unsatisfactory condition of the nation's apicultural affairs and yet withholding support from the association which seeks to better these conditions, is like crying "Fire!" and refusing to throw water. If "in union there is strength," let's unite.

THE "WATER CURE."

A New and Simple Method by Which it is Claimed Queens May be Safely Introduced.

(Henry E. Horn).

SOME time ago a German bee-keeper wrote to the Leipziger Lienen-Zeitung of a way, called by him the "water cure" of introducing queens. As described, his method was simplicity itself, and consisted merely in plunging the queen, held by her wings, into a cup of clear water, hold her there for about five seconds and then put her between the frames of the new colony, and shut the hive. The thing was so enticing that I tried it the first chance I had, and in two days after I opened the hive and found—nearly a frame full of eggs and the queen walking about as if she had been there for years.

To be explicit: I took a laying queen out of her own colony, put her through the performance and had her in the new, formerly queenless colony, all in about five minutes. There was a little honey coming in, still the time was rather unfavorable for introducing generally.

Since that time some more reports have been made, and some of them are rather remarkable. As, for instance, where a queen, twice balled, though the cage method of introduction had been used, was freely and immediately accepted after a dipping.

If this method should prove successful generally, what a lot of bother and trouble and disappointment it would make avoidable to bee-keepers. Will not others likewise risk a less valuable queen and perhaps dip her two or three times for about four seconds each, and let us all know results?

Riverside, Cal., Sept. 14, 1903.

DRONES.

(Arthur C. Miller).

ARE drones ever used as heat producers or brood warmers? A case which came under my observation October 3 pointed very strongly that way. In examining some colonies containing late reared queens, I found one small one where the conditions were as follows: Three L frames of comb with about sixteen square inches of brood on each surface, the upper and end parts of the comb fairly filled with stores. The next comb to the three was also well supplied with honey, part of it sealed; the other five combs were empty. The colony consisted of a little over a pint of bees, about one-third of which were drones. The latter were mostly from other colonies and had found a safe haven with this neighbor when driven from home. They were spread closely and evenly over nearly all of the sealed brood and during examination kept quietly in their place. The few that flew from the hive were permitted to come and go without molestation. As the entrance of the hive was wide open 3-8x 14 inches, I at first thought that the workers had been unable to keep the drones out on account of the large entrance and small number of "guards." I narrowed the entrance to one inch and at this writing the drones are still permitted to enter and leave at will. In all other respects the colony is normal; the queen is large and lays properly.

The weather during September was cool, unseasonably so, but thus far during October it has been warm. There has been no frost in the locality where the apiary is. If the drones are not being kept as heat producers, what are they kept for? Certainly the quantity of brood is too great for the workers to properly protect and certainly the drones were closely covering all their numbers could. The drones seemed plump and well fed and flew rapidly when disturbed.

Two other colonies with queens of the same age, but having a contracted hive with only three L combs each, and with a small entrance, had in one case a half dozen drones and in the other case none. Some large colonies with full supplies and young, healthy laying queens still retain a few of their drones.

Such are the circumstances; perhaps other bee-keepers can help solve the problem.

While writing of drones it may be of interest to consider some of the ways of keeping desirable ones on hand either during the warmer part of the year or late into the fall. Queenless colonies will, of course, harbor drones, but queenless colonies are a trouble and a nuisance. They should be kept strong, laying workers must be avoided and emerging brood be frequently supplied, for otherwise the drones are not sure of being well fed and vigorous, and hence will not fly freely.

The method which I have found to be the easiest and at the same time the most effective and always under perfect control, is to confine the drones to a super or other chamber containing combs, and placed over a strong colony, but separated from it by "excluder zinc." The workers pass freely and store honey and the drones are always well fed and will fly not only on the day or hour we wish, but are ready at any moment to take wing. To release them the upper chamber is raised at the rear end a half inch from the excluder. The drones will tumble out like a lot of youngsters from school. Released from the rear of the hive they more readily find their way back, not being attracted by the workers returning to the regular entrance. When the drones have ceased flying for the day they are confined till wanted again. A few drones will die from various causes, but most of them keep in the best of condition. I stock such an upper chamber either by placing in it combs of drone brood, or by releasing therein a trapful or more of drones. The first way is the best, and one is sure of having all the drones of the desired stock.

I do not know whether this plan is original or whether I got an inkling of it from some article, but it works most satisfactorily. The life of the drone offers the bee student an almost unexplored field, and it should yield rich returns to the diligent searcher.

Providence, R. I., Oct. 7, 1903.

(The October number of the Irish Bee Journal contained a discussion relating to drones, which, in connection with Mr. Miller's foregoing study of the subject, will doubtless be of interest to our readers. We therefore reproduce it.—Ed.)

THE DEATH OF THE DRONES.

(Dr. A. W. Smyth.)

Drone bees cannot survive the winter in a temperate climate. They cannot hibernate, or form hibernating clusters, to save them from the cold. Some food is required by animals when in the dormant state, and the drones have no honey sac or other means whereby to store it, and although larger than the worker bees, they are more sensitive to cold. The male or drone of wild bees do not live through the winter.

It is generally believed that on the approach of winter the worker bees kill the drones, but I never yet have seen a worker bee kill a drone The workers occasionally kill each other, and if a young queen returns to the hive after leaving with a swarm, the workers will sting her at once. When afterswarms or casts are being united one of the young queens will sometimes take flight and return to the parent colony if it happen to be near, and in a very few minutes she will be found dead in front of the hive. A worker or queen bee entering a strange hive is frequently killed, but a drone rarely or never.

The workers in the fall keep marching and driving out the drones, so as to have them die on the outside of the hive and away from the colony. A dead drone in the hive in winter is very objectionable to the workers. A whole colony of workers frequently die in the hive, but I never detected any unpleasant odor from dead worker bees, while a dozen or two of dead drones will give off a very disagreeable odor in putrefaction. The poison in the worker bee becomes disseminated through the body after death and arrests decomposition. It is a curious provision of nature that the poison of the worker bee should act as a disinfectant in the dead bee for the protection of the living, but all the facts indisputably lead to that conclusion.

It is known that the bodies of animals and men fatally poisoned with the salts of arsenic or of antimony resist decomposition for some time; and long ago it was thought that the occupation of individuals had something to do with preserving their bodies after death. Shakespeare expresses this idea when he makes the grave-maker say to Hamlet that "a tanner will last you nine year." The application to the tanner is, as intended, ludicrously absurd; but in the idea there may be a modicum of truth.

In Shakespeare's time the microbes were not known, and water was considered the great cause of decay. We know now that water alone, without the microbes, cannot decompose organic matter, and that, as the microbes are composed of fifty per cent. of water, water, for this reason, is necessary to decomposition.

The process of getting rid of the drones, before winter stops all active work in the hive, is a sanitary or hygienic measure taken by the worker bees to protect the colony from disease which might arise from dead drones in the hive. It is often said that queenless colonies do not discard the drones. For a good reason the workers delay the sanitary measure, which may sometimes be neglected altogether, but I have seen queenless colonies driving out the drones. Fortunately for the bee-keepers' interests the worker bees do not study economic measures as closely as they do hygienic measures, and if our hives were constructed without floor-boards, so that the drones excluded from the hibernating clusters would fall to the ground when chilled by the winter cold, the workers would not eject the drones from the hive.

A strictly hygienic hive would probably be a hive without a floor-board. Langstroth and Cowan have stated that they knew bees to winter safely in hives without floor-boards, and Langstroth states in the first edition of his book that the only colony he had to survive an unusually cold winter in the State of New York was in a single-walled hive without any floor-boards—the colonies in hives with floor-boards all having perished. Langstroth mentions, however, having given some upward ventilation to these hives in which the colonies perished. The top of hives for wintering colonies safely in snow should be hermetically tight.

Doctor Draper said that man would yet learn sociology from the bees, and hygiene might be added. The bees will teach more than the "act of order to a peopled kingdom," but only when the people of the kingdom are ready and willing to learn.

In our climate the drones do not die of old age, and their death and life-work are by nature inseparably united. The life of the drones, soon to end from the winter cold, is shortened by the worker bees in order to protect the colony from disease, the preservation of the colony requiring that the drones should not die in the hive in winter when the workers are unable to do any sanitary work, or to carry out the dead.

The Seasoning Series

By Deacon Hardscrabble

Dear Brother Hill:—I've been back about a week and be a feelin' right smart. Doc sort of knew what I needed, I 'low. Well since I returned the Parson has camped here most of the time—things kind of ornery down his way, tho' he don't mention it—and he's been relieving of himself on me. I can always stand it from the Parson 'cause his doin' is always ahead of his preachin'. He sot me to cogitatin' rather more'n usual, kinder overstocked me, so I'll be a lettin' of it out on you. Why you? Wal the men as has bees be about the same as tother folks, only sometimes more so here and there, and if I tell you it'll leak out—generally does—so all hands will get a taste of it.

Don't throw mud at my idols, if ye do I'll hate ye. They may be battered and tattered, bedaubed and bedraggled, the sawdust may be a runnin' out of 'em and their tin halo be on askew, but they're my idols and you're a low down cuss if ye don't like 'em, in fact you are a bigoted, biased, bucolic, bumpkin if ye don't see and think as I do. Yas, some of the boys is riled 'cause I twitted on facts 'bout some of their dearly beloved. Well, 't aint my fault if they placed their affections on uncommonly common clay. The kind as makes long prayers in public places be as plenty now as they used to be—and they will bear just as much watchin'. 'Cause a man hollers "no rum" it don't follow that he is "temperate"—like as not he'll drink water till he's sick, eat grub till his wife is sick, preach till we're all sick and then sell us poor stuff at fancy prices and pose as Big Mogul Authority just 'cause he's a "exhorter." Waugh; Heap Big Injun; Keep your hands off of my idols.

"Everything that lives seeks its own advantage and well being, and must, if it is to live," so blame them not my boy if they live no higher than their lights.

It's so durned easy to tell how things oughter be done and so blamed hard to go and do 'em, and when the tellin' yields cash and glory and the doin' don't, ye can understand why some of the exhorters keep on hollerin'—they're following the line of least resistance.

So you think two parties are a powerful bad thing in the National Association? Harry, you were never more off in your life. It's the very best thing that could have happened to it. Don't you know that a nation is in a mighty ticklish place when it ceases to have two strong opposing political parties? Just so with associations. The National was a gettin' rotten till some of the daring ones begun to stir and formed an opposition party to the "We're It's." Now the air is clearing. Course there are sore heads, the "Outs" are always thus, but them as is some stuff will get over it, and them as don't they belong to the Graft.

You just want to keep remembering that the bee biz is a getting to be some punkins and there's money in it, and where there is money floating about you'll find "graft," and it's right now all the boys big and small have got to keep their eyes peeled or fust thing they know the dearly beloved will hold the whip hand. Whoop-er-up for two parties but keep 'em fighting for principles and not let 'em get to mud slinging. We've dropped swaddling clothes and nursing bottles, got beyond the place where we can stand around digging up the sand with our bare toes, for we're nigh about men and these ere fellows who are a trying to amuse us with nursery rhymes need our stern and forceful attention. Watch 'em.

Yours as ever,
John Hardscrabble.

(All Bee-Keeper readers, or nearly all, will be pleased to learn that the deacon has so far recovered as to be able to continue his series of letters. We fear, however, that he is hardly himself yet, and would suggest that he take one more trip. With all due respect to his years, The Bee-Keeper desires to emphasize the assertion that, in regard to his observations relative to the opposing factions which were formerly at work in the affairs of the National Association, he is "off his base." Legitimate competition of independent, and well-organized institutions, whether for industrial, commercial, fraternal or political purposes, is one thing, but internal ruptions, breeding discord, contention and strife within any such institution, curtails its influence for good by the agitation of distrust among members and prospective members, thereby menacing the accomplishment of the benign purpose for which it exists. The deacon should try a balloon trip.—Editor.)

Our
Correspondents

Berclair, Tex., Oct. 11, 1903.

Editor American Bee-Keeper:—The more that is said the less we know, or, at least, so it would seem sometimes. The beginner would be at a loss to know what to do—or whether to do at all—when one says this, and another that. But we might get good out of it, provided what was said was so. A man ought to be sure he is right before blowing his horn.

In the Bee-Keeper for August Poppleton says bee paralysis is contagious; then comes E. J. Atchley who says there is no such thing as the disease being catching, as there is nothing to catch; that the bees only have their stomachs too full of chyle, and claiming that none but worker bees ever have it. Perhaps he has never seen any but workers have paralysis, but I have seen more than one queen affected with it; and the fact of having seen queens affected knocks out all his lengthy article, with me. But if he has found the cause and Mr. Poppleton the cure, sure we need not lose many more bees from this cause. I am not going to kick very hard because a man writes what he thinks he has found out; but I do say, this is a stunner on the beginner. That statement made by J. E. Johnson, of Illinois, and called into question by Z. Cornell, of Pennsylvania, did look rather "fishy."

Yours truly,
John W. Pharr.

"HONOR TO WHOM HONOR."

Marengo, Ill., Oct. 16, 1903.

Mr. Editor: On page 234, speaking of the officiary of the National Association, you say: "It is gratifying to note that the management of the National's affairs is passing exclusively into the hands of active producers of honey." I'm sorry you said that, for whatever you may have meant, it will be understood as saying that in the past the Association has suffered because among its officers have been men who were not active producers of honey; thus doing injustice to men to whom the Association owes much.

You say, "Bee-keepers themselves, perhaps, know better than any one else what they want." Suppose it is said, "Bee-keepers, perhaps, know better than any one else what they want in a bee-journal." And then suppose some bee-keeper proposes to dictate to you just what shall and shall not go into the columns of your journal, saying, "I am a bee-keeper, therefore I know what bee-keepers want." Would you, my good friend, be likely to put the reins in his hands? Hardly. You would be likely to say to him something like this: "Now, see here, my friend, I grant you that you know pretty well what you want, but there are others, and I believe I can tell better than you what the majority of my constituency want, not because I am a better bee-keeper than you, but because I am an editor, and have made it my study to know not only what one bee-keeper wants, but what bee-keepers in general want."

The very fact of a man's being an editor, if he is fit to be an editor, bespeaks a knowledge of the wants of bee-keepers beyond the knowledge of their wants he would have as a bee-keeper. Now, so far as I recall, the only men heretofore upon the management of the National that were not conspicuous as active producers of honey were editors, some four or more of them, and the very qualifications that fitted them for knowing what bee-keepers wanted for reading matter, fitted them to know what bee-keepers wanted as members of the Association.

I think Thomas G. Newman had less to do with the production of honey than any of the others, and look at the grand work he did as general manager. Geo. W. York has never been very active in the production of honey, and yet I do not believe any one man has done as much as he since the organization of the present association to increase its membership, and to advance its interests.

I've no objection to having the affairs of the National exclusively in the hands of active honey producers, so long as they are competent men, but please, Mr. Editor, don't hint that in the past some of the men on the management were not among its best because they were not active producers of honey. C. C. Miller.

Doctor Miller's criticism is interesting and very welcome, indeed. The spirit manifested is characteristic of his inherent good will to fellow man, while the actuating motive is, obviously, a fear that unjust reflections have been cast. The doctor says he is sorry we said a certain thing. If any injustice has thus been done to any one, we're sorry too. We said it because we felt it; and we have yet had no occasion to regret either the thought or the expression thereof. The fact that the editor of The Bee-Keeper finds personal gratification in contemplating the preceding fact that "the management of the National's affairs is passing exclusively into the hands of active honey producers," need not, and should not, be construed as reflecting depreciatingly upon the good work bestowed in years past by any of the many faithful officers, which list we well know, includes the names of Newman, Hutchinson, Root, York and others. We should be the last to depreciate, even to the smallest degree, the humblest effort of officer or lay member if directed with a view to the betterment of apicultural conditions in the United States. All honor to those who have done, and are yet doing so. These concessions, however, in nowise affect the fact that we derive pleasure from a contemplation of the passing of the National's affairs into the hands of active producers of honey. We have not said, nor intended to infer that "the Association has suffered because among its officers have been men who were not active producers of honey." The recent progress of the Association is in itself ample evidence of the good work of its previous officers. They have reason to reflect with pride upon their accomplishments; and their faithful service is, we believe, with few exceptions, regarded with satisfaction by the membership. But does all this preclude the possibility of greater strides under changed conditions incidental to the passing of time? Does it even imply, of necessity, that there has been nothing possible left unaccomplished? We have said bee-keepers themselves, perhaps, know better than any one else what they want," and the faith still abides. If they don't, we don't know who knows better than they. They ought to know as well as any one not a bee-keeper, surely.

The doctor's second proposition is the easiest thing that's been sprung on us for a long while, and substantially makes good our claim that bee-keepers do know better than any one else what they want. Any editor, "if he is fit to be an editor," closely studies the "wants" of bee-keepers, or down would go his journal. He is, in fact, dependent wholly upon either his patrons or his personal experience in their ranks for knowledge of their wants; and we maintain that no amount of training at the editorial desk will yield the knowledge essential to the best results either in the management of an apicultural journal or an apicultural association. Note the zest characteristic of editorials written under the inspiration of a day's contact with practical apiary work, as displayed, for example, in the case of Mr. Root, editor of Gleanings, occasionally. Whence cometh this distinguishing activity and practical tone which arrests the interest of the reader and causes him to feel that he is an eye witness, if not a participant in the operations about which he reads? Whence? From the fountain head which is the source of knowledge upon which our industry is based, and without which it is improbable, to our mind, that any man is better qualified to direct, than those who have freely imbibed. Is it not within the bounds of legitimate reason to anticipate a similar influence upon the affairs of the National Association as a result of this contact with the practical side of the duties we have espoused? We trust Doctor Miller may be spared to see and recognize the benign influence of such contact.—Ed.

THE
Bee-Keeping World

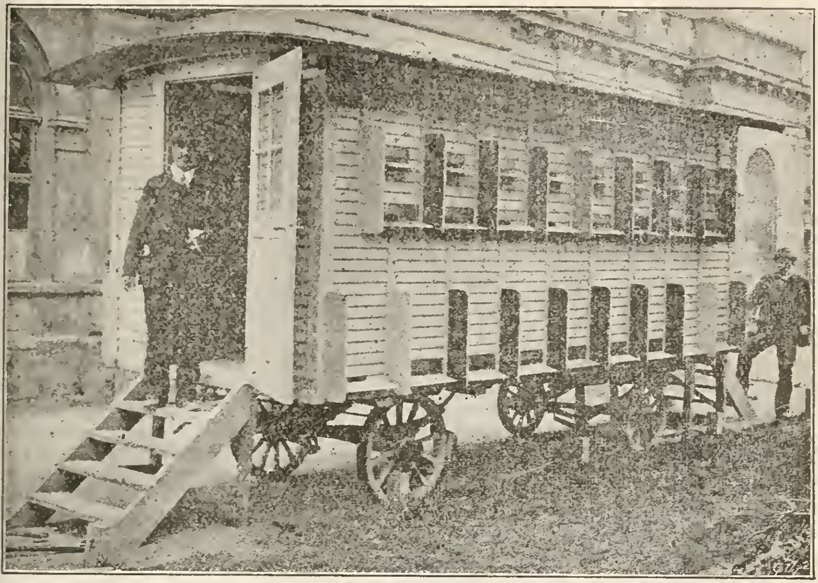
AUSTRIA.

The picture below shows a portable apiary (on wheels) as shown in Vienna at the international apicultural exhibition, 1903.

The Bienen-Vater gives a brief history of a centarian bee hive as follows: The hive measures two meters in diameter and contains six colonies. It is now owned by Herr Mansbart in Zauchtl and has been in the family since 1830. The record of this giant hive dates back to the year 1793. Hundreds of swarms have issued from

t and large quantities of honey have
een taken during these many years.

A local apiarian exhibition has been rranged in Klagenfurt in connection with a honey market. The price of the honey is to be decided upon by a committee, and no honey must be sold at a lower figure under any considera-



tion. The place for the honey sale is to be so chosen that every visitor must pass it.

BRAZIL.

The black, brown or German bee was originally imported into Brazil by missionaries. Runaway swarms soon filled the woods and were the means of preserving the honey bee in this country. A writer from Brazil states in Bienen Vater that only black bees are kept there, but that he has just succeeded in importing two Italian swarms. The voyage from Geneva to Rio de Janeiro lasted 28 days and the bees arrived in fair condition. He is now busy Italianizing his 14 colonies.

GERMANY.

Dr. Dzierzon has practiced clipping queens for years for the purpose of preventing swarms running away at his out-yards.

To what age to which the worker bee may live was ascertained by the same old veteran a great many years ago, and before the bee had been meddled with, and had, as Dr. Gallup would say, "degenerated." Dzierzon's conclusion was that the worker may live during the winter season and attain an age of three months, but during the busy season she lives but six weeks. The queen sometimes attains the age of five years. (From this it appears that our bees have not degenerated during the past 50 years as has been insinuated for as I have repeatedly proven our bees now live to exactly that age.)

Meier of Kapellen, according to Leipz. Bztg., assures that bees can be induced to make use of gathered wax in constructing comb. He experimented with a little late after-swarm weighing but one-quarter pound, fed it with honey which contained particles of wax saved up by straining extracted honey. The dark color of the wax fed showed plainly in the combs built by the little colony. Wax offered dry, not in the wet feed was not touched by the bees.

Reidenback says in Phalzer Bztg.: It has been observed that colonies remaining in the heath districts for three seasons usually show foul brood. The reason for this rather queer occurrence may be found in the fact that there is no pollen produced in these localities and the bees actually starve or at least their vitality is reduced to such a low state that the foul brood Bacillus can and does soon get the upper hand. Germany and Switzerland are said to have excellent honey crops up to 100 pounds from single hives have been reported.

It is the custom of bee-keepers in Germany, when removing the accumulated dead bees, etc., from under their hives during the winter months and in the spring, to sweep them upon a screen and sift out all the particles of wax, granules of honey or anything else and make a saving of them. Steigel, of Oberfellabrum, has made a careful study of this matter and has found that the wax, pollen and other particles thus saved during 12 months weighed only 7 1-4 grains. Incidentally he remarks that this small amount of accumulation is evidence against the theory that bees void their excrements in dry form within the hive.

Reidenbach also claims that an energetic, healthy colony cannot take foul brood at all, as the bees would remove every diseased larva very quickly; that they have within reach the very best remedy to fight the disease—formic acid. Formaldehyde vapor if properly applied, he says, will kill even the spores of Bacillus alvei.

In Deutsche Bzcht. L. Spitz condemns, in the strongest terms, the practice of rearing queens by allowing a colony to build queen cells over larvae. To obtain good queens they should receive proper treatment from the egg.

"Great size of queen bee," says Fitzke in Centralblatt, "is not an indication of prolificness." One of his colonies after proving itself a "number one" for three successive years, being very populous all the time and paying well for its keeping, in honey, was found to possess a real dwarf queen. After substituting a large, handsome queen the colony kept running down.

According to Schoenfeld formic acid finds its way into the honey through the mouth parts of the bee, not by way of the sting apparatus. Die Biene.

F. Greiner.

Naples, N. Y., Oct. 4, 1903.

BELGIUM.

Sometimes a swarm is seen either in he air or after it is clustered but not vhen issuing from the parent hive. f the apiarist desires to know from vhich hive it came he can take (from he clustered swarm) a cupful of bees, arry them to some distance, dust them vith flour and turn them loose. A ortion of them will go to the old hive vhich can then be identified. This s given by Dr. Debienne in the Ruher Belge. He adds that when different apiaries are close together this vould be a good way to determine rom which a swarm came.

In the same paper he also says that swarm settling pole or something like hat is often useful. The best in his xperience is a bunch of bushes tied o a pole. He quotes Chas. Dadant s saying that an old dark comb tied o a pole has succeeded best with him.

Mr. Leger in the same paper says oney is the best cure for the "gout." t is used externally, being used on the art afflicted with a bandage.

Sometimes in winter, a fine warm lay induces the bees to come out when here is snow on the ground. A great nany drop on the ground right in front f the hives and are chilled and lost. Vhile a flying spell is beneficial, we lo not want to lose our bees. Mr. E. 'an Hay (Rucher Belge) advises to ut some straw on the snow in front of he hives.

A plant often cultivated in Europe ut not here is the "horse bean." At east I think this is the English name f it. Usually it does not produce any ectar, but in one case quoted in the Rucher Belge, it did. Investigation showed the presence of aphis .and herefore it was a genuine case of oney dew. The fact in itself is of no nterest to the American bee-keepers; ut it may show why some plants, usually barren of nectar, will occasionally yield a good crop.

Mr. Wendel Walter describes a peculiar process to fasten starters or sheets of foundation in frames. Over a fire he places a sheet of iron. On this he put the frames upside down, that is the top-bars on the sheet of ron. When the top-bars are hot enough to melt the wax, he drops the sheet of foundation on them, and plunge the whole in a convenient vessel of water. The wax melted by the contact of the warm top-bar is cooled and solidified by the water, and thus fastens the sheet of foundation.

The Rucher Belge quotes from a German paper the following process to introduce a queen: Operate in the morning, when most of the bees are in the field. Take the old queen from the comb. Put in her place the new one well daubed in honey and replace the comb. The bees will proceed to clean her up and never suspect that a change has taken place.

The same paper in its editorials gives the following recipe to get the bees out of a hollow tree or any other inconvenient place: Put a sponge impregnated with phenic acid under the bees. The odor will drive the bees outside where they will cluster. If necessary bore a hole in the tree so as to reach below the bees and introduce the sponge thereby.

The Rucher Belge has a monthly department for beginners, concerning the operations to be done in the apiary and how to be done. Among other precautions that may be useful, it says that rubbing the hands with some camphorated alcohol will prevent stings. Also that when the bees are so enraged that ordinary smoke will not subdue them, the best is to add some tobacco to the smoker fuel. That will fix them.

In the same department we find some advice on transferring. The usual European method is first given. Drive the bees (the queen is the one especially needed) in the new hive and place the old one on top of it with a perforated zinc between. All openings must be closed except the entrance to the new hive. After twenty-one days take away and demolish the old hive. If desired, its combs may be fitted in frames and used. The second method is to turn the old hive upside down, (supposed to be a skep), and put the new one, bottom included, on top of it without driving the bees. A hole in the bottom allows the bees to go down and come up. The entrance of the new hive is the one used. Practically it is putting the old hive under the new one, but compelling the bees to go in and out through the new one. As the heat goes up, the queen soon goes up too, in the new hive, where it is the warmest.

The same also advises to put a comb of honey or a feeder full of syrup in the hive where an artificial swarm is to be lodged. He says that an artificial swarm does not carry the same amount of honey as does a natural swarm. This goes out with enough to last three or four days.

Adrian Getaz.

MISTAKES AND THEIR LESSONS.

(L. B. Smith.)

Mr. Editor: With your permission I will tell the readers of The Bee-Keeper something of my success as well as the mistakes I have made in bee-keeping the present year. You know we often profit as much by the mistakes of others, when they are pointed out to us, as by their success.

My success is "short, but sweet," as the saying is. I started in the spring with about eighty full colonies of bees, all pure Italians, and by May 1st they had increased to something over a hundred by natural swarming. I work my bees for extracted honey and keep down increase as much as possible.

All old colonies had from three to four full sets of drawn comb, and were just "boiling over" with bees, as the queen is allowed full access to all combs, and I always have good, young, prolific queens. I was congratulating myself on having my bees in the best possible condition for the early honey flow, which comes from the wild marigold and mesquite. In fact the honey flow had already started, and some of my best colonies had from 40 to 50 pounds of new honey, but on the last day of April the wind shifted from a gentle south breeze to the northwest and an old-fashioned Texas "blue-norther" came up, followed by a white frost on May 1st, killing most all tender vegetation. My hopes then went from a hundred down to zero.

The two succeeding years had been almost failures, owing to the great drouth that prevailed over the State, and now a third failure seemed sure.

What was I to do? Over a hundred colonies of bees in a starving condition, sugar high and my means limited. Being a "natural-born" bee-keeper, and great lover of our little pets, I was not long in deciding what course to take.

I began doubling up most of my new swarms till I had ninety colonies, drawing frames of honey from the rich to supply the poor, but only too soon the supply was exhausted, and all was at the point of starvation. What should I do? Let them starve and turn my attention to farming? These were the thoughts that were racking my brain day and night. I had never seen a complete failure in the honey crop, after we had had so much winter and spring rain as we had the present year. Neither had I ever seen so late a freeze in this State in all my twenty years as a bee-keeper. I began to reason this way: "Should a man give up farming because his crops had been a failure from drouths, freezes or other causes? No, no! Any sensible man would not do that." Then I said to myself, "Why let the bees starve?" So I began buying sugar and feeding and fed nearly a barrel of sugar to the ninety colonies, when they should have been storing honey and swarming. Now for the result.

I have extracted up to this date 313 gallons of as fine mesquite and sumac honey as any one could wish for, with a fair prospect of getting a fall crop from broom weeds.

Now for some of the mistakes I made: First, I should have fed double the amount I did, to have kept my brood rearing to its fullest extent and not have allowed my enthusiasm to run down, when the bees needed the best and most careful attention. My second mistake was in not moving my whole apiary to a dense growth of sumac some eleven miles away, where I moved fifty colonies and secured 153 gallons of choice sumac honey. A third mistake was in not having all needed supplies on hand when the honey flow came.

If this doesn't find its way into the waste basket I may tell of other mistakes I've made in apiculture in the past twenty years,

Rescue, Tex., Oct. 10, 1903.

THE AMERICAN BEE-KEEPER

PUBLISHED MONTHLYBY
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H. E. HILL, - EDITOR.

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Editorial

The steady decline in the supply of basswood threatens future trade in the line of one-piece sections; and the erstwhile popular four-piece style promises to supercede, perforce, the long fragile strip which now holds sway in the supply market. From The Bee-Keeper's viewpoint, however, the comb honey industry will suffer naught as a result of such a condition. Less leaky and repulsive-looking sections will be seen in retail stores, and the work of crating will be greatly facilitated. As has been the case with black bees, the four-piece section has characterteristic virtues which have been lost sight of in the turmoil incident to the introduction of a new fad.

With reference to Mr. Atchley's theory as to the cause of bee-paralysis, Mr. O. O. Poppleton, whom we consider one of the very best authorities in the country upon the question, says, Mr. Atchley must have either a very peculiar kind of bees or an unusual form of paralysis. "For," says he, "One of the distinguishing characteristics of the malady is an abnormal brood-rearing inclination. So much so that they are rarely able to care for the excessive amount of brood found in afflicted colonies."

A Texas subscriber who is a friend of The American Bee-Keeper, and who sent last month a list of new subscribers.together with a nice list of bee-keepers' names, apologizes for so doing without having authority to solicit subscriptions for us. While expressing our sincere gratitude for such kindnesses, we desire also to state that every reader of The Bee-Keeper is an authorized agent therefor, and we deeply appreciate such evidences of friendly interest in the welfare of The Bee-Keeper. Subscribers in Illinois and Massachusetts, also have our thanks for lists of new ones sent in during the last month.

The superiority of "heath honey," has been generally admitted ever since the writer first became interested in apiarian matters. We have therefore always had a sort of "longin' " to gaze upon the heather-clad Moors of Britain, to which "bee-gardeners" flock with their colonies during the period of bloom. It was not until recently, however, that we were permitted to see even a single specimen of this most beautiful plant: and our thanks are due to Mr. John Hewitt, of England, for a couple of sprigs of heather in full bloom, which arrived in excellent condition. The beauty of the masses of lilac--colored flowers, combined with its feathery leaf, not unlike that of the cedar, surpasses even our dreams of the heather. Such acts of thoughtful kindness, and evidences of good will are deeply appreciated.

IS HONEY STRAINED OR EXTRACTED?

The drug journals of the country quote "strained honey" to the trade. So long as "extracted" is meant and understood, it probably makes no difference as to the term employed; however, few bee-keepers would care to take strained honey, even as medicine. —American Bee-Keeper.

We are not familiar with the technical language of bee keepers, but in ordinary English strained means having passed through a strainer, and what the objection to that is, we do not see. In pharmacy, extracted means taken out by pressure, generally with maceration or solution, or by chemical means, and in that sense we hardly think honey is extracted. We would like for the Bee-Keeper, or any one who is better posted than we are, to enlighten us further. In the meantime "strained" remains in our prices-current.—Southern Drug Journal.

A brief explanation upon this point may be of interest to many of our younger readers, as well as to our esteemed contemporary; which, by the way, is one of the best-edited and spiciest trade journals that come to our exchange table.

In the nomenclautre of modern beedom the word "strained" honey is used, as it has been since time immemorial, to designate that inferior product resulting from crude methods of production; when combs were cut from the brood-nests of the colony containing cocoons, pollen, dead bees and other foreign matter, and the honey extracted by pressure upon a strainer of some coarse fabric. In remote and unprogressive sections of the country this same antedeluvian plan of securing liquid honey is still practiced. The product, by reason of the filth contained, is necessarily inferior and unwholesome; though, as a preservative in the treatment of "honey-cured" hams, or other manufacturing uses, it finds a market at a very low price. Fermentation, to a greater or less extent, is usually evident in samples of "strained" honey. It is rather a humiliating fact, to Southern apiarists, that the South supplies considerably more than its legitimate pro rata of this inferior product; which became known in the markets, as a result, as "Southern honey."

In the year 1865 (the very year that the writer "came to America") Major Francesco de Hruschka of Italy) invented the honey-extractor. A new era in apicultural history was thus inaugurated, and the antiquated "straining" and squeezing process was promptly forsaken by progressive apiarists.

Major Hruschka's invention consisted of a machine by which combs filled with honey were subjected to a high rotative motion—expelling the honey by centrifugal force,without in anywise defacing or injuring the comb. The empty comb is thus made available for further use by the bees as a receptacle for honey; and is thus continued in use year after year, by modern apiarists.

This is the "extracted" honey of commerce; and though it is sometimes passed through a thin strainer, to arrest any small particles of wax, it is usually dumped directly into large tanks, where the greater specific gravity of the liquid soon forces to the surface any possible bits of foreign matter it may contain, when it is drawn into barrels or other shipping packages,from the bottom, in a perfectly clean and clear condition.

The quality of honey thus produced is, obviously, superior to the old-fashioned, "strained" product; and even retains the delicate flavor and aroma characteristic of its floral source.

"PUNIC" BEES.

One of the surprises of the past month, at The Bee-Keepers' Florida quarters, was the receipt of a "Punic" queen from Mr. Hewitt, the enthusiastic British champion of this black race. At the same time Mr. Hewitt took occasion to send us a batch of recent letters from persons having this stock; and if one may judge by the tone of the letters in question,the "Punics" are not without characteristic virtues that should be more generally known. These bees were under discussion several years ago, being called by some "Tunisians," and by others "Punics," but, unfortunately, an international wrangle occurred which resulted in a suppression of the subject by the apiarian press.

We shall observe the progress and traits of our new stock with no small degree of interest.

DEVELOPING THE HONEY MARKET.

When the National Bee-Keepers' Association undertakes the handling of America's honey product—packing, under its official trade mark and guarantee in suitable packages for the retail and manufacturing trade each year honey to the value of ten, to fifteen million dollars, and makes an appropriation for publicity of, say, $100,000.00, per annum, then honey producers will begin to reap a fair reward for labor and investment involved.

To expect the National Association to undertake such a gigantic project with but one or two thousand dollars in the treasury, is inconsistent. The initial step in such an enterprise must be the provision of capital with which to conduct the business; and it does seem that all should be willing to contribute one dollar a year towards lubricating the wheels of its almost stationary mechanism. Complaints of unpropitious conditions in the apiarian realm come with poor grace from those who decline to administer a single drop of oil.

ARTIFICIAL POLLEN.

A short conversation which we had with Mr. Benjamin Parks, of Stuart, Fla., who, by the way, is one of Florida's very successful and most intelligent apiarists, leads to the thought that the occasional suspensions of brood-rearing, not otherwise accounted for, may find a solution in the absence of pollen in the field, so essential to the rearing of brood.

By some means a barrel of whole-wheat flour became exposed on the back porch of Mr. Parks' residence, which is accessible to his bees; and the result was that they were attracted thereto as if it were an open barrel of honey. Mr. Parks advises us that when the bees were discovered at work on the flour, they had exhausted the surface supply to such an extent that nothing but the bran was to be seen, whereupon he spread out a quantity for the bees' convenience, and they were but a short time in reducing the avoirdupois of the bulk to the extent of about thirty pounds. They simply "went crazy" over the unexpected feast, tumbling over each other in a general fight for the spoils.

This we deem a most noteworthy incident, the importance of which will be more apparent when it is stated that Mr. Parks' bees were thus stimulated very perceptibly, and brood-rearing was pursued with marked vigor, as a result of the flour stored and used.

The fact that bees in South Florida usually gather pollen to some extent continuously throughout the year, may possibly have caused us to neglect a most important item in assisting their efforts to become strong in numbers. Others than those of "the land of flowers" may also profit by the suggestion.

"The bees were the first canners, and their goods will keep for all time if stored in the right kind of an apartment free from frost and dampness."

A more ideal combination has never been arranged than that of Mrs. Edith Wharton to write a series of articles on Italian Gardens with Maxfield Parrish as the illustrator. This is one of the features of The Century Magazine for the coming year. The first article in the series will appear in the November number, and will contain four of Mr. Parrish's pictures printed in color. Mrs. Wharton, who wrote "The Valley of Decision," has long been sympathetically familiar with Indian outdoor life, as has Mr. Parrish, who was sent over to Italy by The Century especially to illustrate the series. It is said that writer and artist have made a study not only of the well-known gardens, but of many from which the public is excluded.

The late B. L. Farjeon left the manuscript of a story for girls and boys which is to appear serially in St. Nicholas Magazine during the coming year. It deals with London's Madame Tussaud and her celebrated wax works; the marvelous doings of the principal characters in that exhibition — Queen Elizabeth, Henry VIII, Tom Thumb, Guy Fawkes, and others, all of whom are brought to life and made to live in the London of today.

FEEDING BACK-FOLDING SECTIONS, ETC.

(D. E. Rogers).

I saw in October, 1902, number of The Bee-Keeper under the head, "Feeding Back and Cleaning Unfinished Sections," Mr. Hutchinson's way of doubling up cases from one hive to another, then feeding extracted honey to get sections filled out.

I am satisfied that will work very well, though I have not the extracted honey. I put two cases on a hive which are nearly full, then one or two with partly filled sections with a cloth between, with one corner doubled over leaving only room for a few bees to pass through at a time, the combs being uncapped, the honey will be carried down in from twenty-four to forty-eight hours. When they are ready for another dose be sure and feed enough, as they will put some of it in the hive proper. I consider this way better than filling a hive body with sections, then introducing a section covered with bees, as others are not liable to get it, especially when an amateur like myself is operating.

MOISTENING SECTIONS.

When sections become dry before folded, or break from any cause, take as many as you can hold firmly in the hands, having the edges even, douse them into a tub of water. The sections will be wet only at the edges and grooves.

White clover honey flow lasted about six weeks here in Bradford county, though rather slow with cold, rainy weather. Buckwheat flow cut short by half, by week of cold rain at best of flow, after which buckwheat was blasted.

Ulster, Penn., Oct. 8, 1903.

"How to make business?" is the paramount question with men of business. Horace Greely would have answered it by saying, "The way to make business is to make it." But the modern successful business man has answered it to his complete satisfaction. He says, "The way to make business (and the way to keep it) is by advertising."—Printers' Ink.

When writng to advertisers mention The American Bee-Keeper.

HONEY AND BEESWAX MARKET.

WASHINGTON GRADING RULES.

Fancy.—All sections to be well filled, combs straight, of even thickness and firmly attached to all four sides; both wood and comb unsoiled by travel stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy white," "No. 1, dark," etc.

Chicago. Oct. 7.—The volume of sales is larger than at this time last year and the supply more than corresponds with sales, but the prices and good quality of honey are expected to make a larger demand than we have had for several years. No. 1 to fancy sells at 13 to 14 cents, with practically no sale for off grades, which are quoted at 10 to 12 cents. Extracted, white, 6 to 7 cents, amber 5 to 6 cents, according to quality and kind of package. Beeswax 28 to 30 cents.

R. A. Burnett & Co.

Buffalo, Oct. 7.—We advise moderate shipments when well crated to prevent leakage. The supply of honey is moderate, and the demand increasing daily. We quote: Fancy comb honey 14 to 15c; No. 2, 12 to 13c; No. 3, 10 to 11c; Extracted, 5 to 6c. Beeswax is always in good demand. Fancy sells at 30 to 32c.

Batterson & Co.

Kansas City, Mo., Oct. 8.—The demand is good and the stock of comb honey fairly large. We quote: Comb, 11 to 13c; Extracted, in poor demand, at 5 1-2 to 7c. Beeswax in good demand at 30c.

Hamblin & Sappington.

Cincinnati, O., Oct. 1.—Comb and extracted honey are coming in freely, and the demand is good, with steady prices. We are making sales at the following prices: Amber, extracted, 5 3-4 to 6 1-2c; White Clover, extracted, 6 1-2 to 7 1-2c; Fancy comb honey, 15c. Beeswax, 30c.

The Fred W. Muth Co.

The more you advertise your business the more business you will have to advertise.—Printers Ink.

Cent-a-Word Column.

The rate is uniformly one cent for each word, each month; no advertisement however small will be accepted for less than twenty cents, and must be paid in advance. Count the words and remit with order accordingly.

FOR SALE.—1280 acres Timber Land; plenty of water; fine for an extensive Bee Ranch. Season June to November. Address William Smith, Cameron, Kern County, Calif.

WILL SELL half interest in my apiary, pineapple and orange plantation. Good apiarist will have exclusive charge. D. DALY, La Gloria, Cuba. 8-2t

WANTED—To exchange six-month trial subscription to The American Bee-Keeper for 20 cents in postage stamps. Address, Bee-Keeper. Falconer, N. Y.

FOR SALE—A Hawkeye, Jr. Camera Complete. Uses both film and plates. Cost $8.00 will sell with leather case for $3.50 cash. Address Empire Washer Co., Falconer, N. Y.

A TANDEM BICYCLE (for man and lady) cost $150, in first-class condition, was built to order for the owner. Tires new. Will sell for $25 cash. Satisfaction guaranteed. Address J. Clayborne Merrill, 130 Lakeview ave.. Jamestown, N. Y.

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REVIEW FOR 1903.

January illustrates and describes a Queen Incubator and Brooder, which allows the bees access to the cells and queens at all times. It also contains several excellent articles on the subject of Commercial Organization among bee-keepers.

February contains a five-page article, perhaps the best ever published, on foul brood. It tells how to detect the disease with unerring certainty, to prevent its spread in the apiary, to keep it under control, build up the diseased colonies, secure a good crop of honey, and at the same time surely rid the apiary of the pest, all in one season, with almost no loss.

March gives the portrait of a veteran bee-keeper of Michigan who manages out-apiaries 50 miles from home with only four visits a year, averaging a profit of $150 each visit. He describes his methods in this issue of the Review.

April has a frontispiece of bronze blue showing Mr. T. F. Bingham's apiary and wintering cellar, and Mr. Bingham describes the cellar and its very successful management. L. Stachelhausen tells how to prevent both natural swarming and increase in an out-apiary, and secure a fine crop of honey.

May illustrates and describes a tank and method for fumigating foul broody combs with formalin. This is the largest tank and most extensive, successful experiment that has been made.

June illustrates and describes the use of the cheapest power for hive-making, wood-sawing, feed-grinding, water-pumping, etc.—a power windmill.

July has articles from such men as R. L. Taylor and H. R. Boardman on "End of the Season Problems," those problems that come up just as the honey harvest is closing and preparations for winter come on apace. Mr. McEvoy also tells how to treat foul brood after the honey harvest is over.

September has an article from Mr. R. H. Boardman, in which he describes his wintering cellar above ground, and tells how he succeeds in controlling the temperature and ventilation—sometimes using artificial heat. R. L. Taylor contributes an article on "Commercial Organization Among Bee-Keepers," in which he states the case so clearly that no more argument is needed.

October is pretty nearly taken up with only two articles. The first is by R. L. Taylor on "The Cellar Wintering of Bees." It is an old subject, but Mr. Taylor has the faculty of saying new things on old subjects. He covers the ground very completely, and gives many a useful hint to the man who winters his bees in the cellar. The other article is by the editor in which he writes of California as a bee-keeping state, giving eight beautiful illustrations made from photos taken by himself when on his recent visit to California. Several of these are full-page.

November or December will be a special number in which the editor will describe that paradise for bee-keepers, Northern Michigan, using a large number of cuts from photos that he took last summer while on an extended visit to that region.

Perhaps you have been thinking of subscribing at the beginning of the year—do it now and you will get the back numbers. If you wait until January you probably won't get them.

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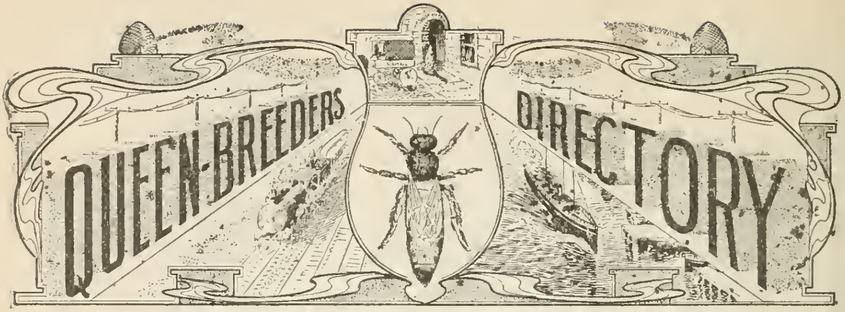

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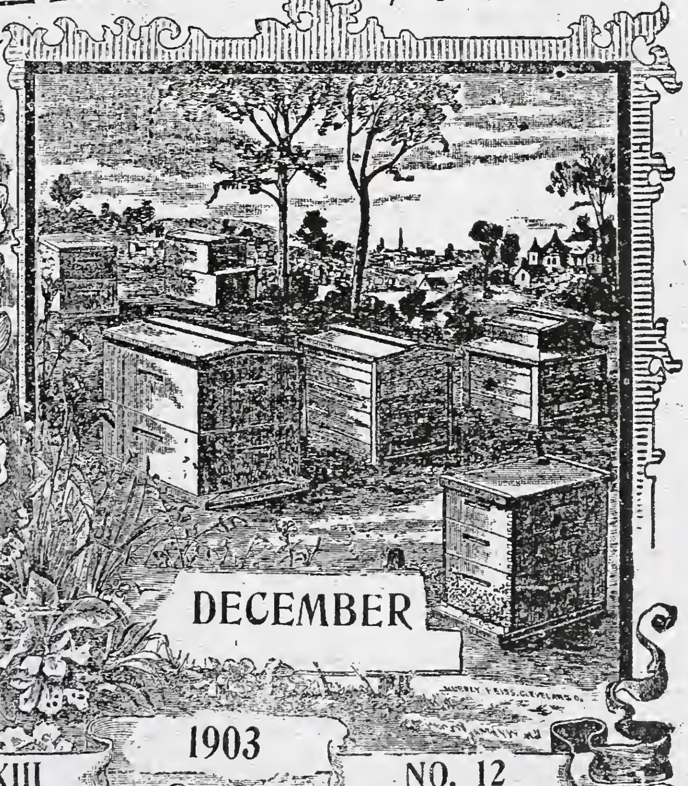

DECEMBER

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VOL. XIII NO. 12

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THAT ILLINOIS HONEY CROP.

(J. E. Johnson).

ON PAGE 225 Mr. Z. Cornell seems to infer that my September report is a falsehood, or an exaggeration, but still wants my plan or method.

On page 249 Mr. Pharr pats Mr. Cornell on the back with the suggestion that my statement is perhaps not a lie, merely "sounds rather fishy." I also see in the November issue that the venerable Deacon comes in for a gentle poke in the ribs for stumbling a little too near the truth. Also the editor himself is taken to task by Dr. Miller. The editor apologizes, but won't take it back; and so it is, each in his turn, must sample his own medicine.

Now I have no way of proving my statements, probably, to the satisfaction of all; but my wife has kept an accurate account of all honey sold and she usually tells the truth.

The cashier of the bank of Williamsfield, whose name is David Cation, has so far taken seven cases of my comb honey and one gallon of extracted, about 160 pounds. If you will write him, enclosing stamp, he will inform you as to my honesty.

Two thousand pounds from twelve colonies, spring count, and increase to 55 colonies, is something unusual here also, but it is true, nevertheless. But I did not stop at that, so, at the risk of being not considered just "fishy" but a whole fish-pond as well, I'll give you my final report:

Twenty-three hundred pounds comb honey, 700 of extracted, 20 pounds of wax, 100 shallow extracting combs, built this year, about 1,000 partly built and filled combs in section boxes, which were extracted and counted in above 700 pounds extracted. The combs have been placed in supers and stand safely from dirt or mice for 1904.

We have good late rains, so an abundant of white clover indicates a good season for 1904.

My best yield from one colony was from a first swarm, 230 pounds. That swarm came off early, and near the close of the honey flow filled brood chamber and five supers chock full of bees and worked in all five supers. This first swarm did not swarm again. They were hybrids—nearly full Italians. White clover was in full bloom and yielded well from May 15 to August 15. What could not any one do in such a long, good honey flow with sweet clover, catnip and smartweed to continue on till frost? But smartweed did not yield very well this year.

No doubt Mr. Cornell is a much better bee-keeper than myself, but I only claim the credit of having enough sense to keep my bees busy in sections when the honey flow was on, and to get my bees strong early in the season.

I have kept bees about twenty years, but never a very large apiary. I kept bees in Kansas three years and took first premium on comb honey at the Allen county fair, in 1892. I take five bee journals, have read "A B C" of Bee Culture," also Langstroth's, Cook's and Hutchinson's books, also Newman's "Bees and Honey," "Amateur Bee-Keeper," and lately Dr. Miller's "Forty Years Among the Bees," but there is just a lot of things I don't know and never will know.

March 13 my bees began bringing in pollen from maple, then I began feeding them syrup. I fed every evening just a little at first and then increased the feed as the bees became stronger and had more brood to feed. I fed in a feeder of my own make, something like the Miller, always in the evening, and over the brood frames with good quilt over feeders and frames, having the syrup lukewarm. This did not interfere with their working on nice days and bringing in pollen and a little honey from maple, box-elder, gooseberry; and by the time apple blossoms came out the bees were strong enough to begin to draw comb in supers and were given one super with shallow frames with starters. By May 15 raspberry and white clover were in full bloom, with a good honey flow from both and bees enough to fill two supers. By the first part of June I had them working in three or four supers. Then a rainy spell struck us, just small warm showers every day for eight days, and the swarming fever struck the bees.

Now I could not have prevented swarming if I had tried, except, probably, by "brush swarming." So the question with me was, to not try to prevent swarming and encourage loafing, but to let them swarm and go to work in supers. Had I not wanted increase I would only have let them swarm once each.

As they were all large colonies, they sent out large swarms. These were hived on small starters, 1 1-2 to 2 inch strips, in broad frames, and starters in sections. Then, in one or two days, I gave another super of sections next to brood frames. In a day or two I slipped another under these two. This prevented pollen in sections and started bees in all supers.

Now right here I emphatically want to say I disagree with Mr. M. F. Reeve, though he is right with small swarms. If I have a very large swarm come off in a good honey flow, no man could run fast enough to give me either comb or full sheets to put them on, as I want them in the supers. If I give them combs in brood chambers they go right into wholesale brood-rearing, which takes lots of bees and honey that ought to go into sections. Yes, I get some drone comb, but that can be remedied afterwards. I would rather have some drone comb than to have good combs and only one-half the honey.

The second swarms were large enough to fill or cover starters in brood chamber and two supers. To the third swarms I gave the shallow frame super from the old colony with what brood there was left in it.

Now, I don't want to take three or four pages to go into details, but one thing I had in view was the late fall flow from smartweed, which often yields well, and when smartweed came in bloom, I had (counting partly filled sections on the hives) about 3,000 pounds, or, I think, nearer 3,500 pounds, with about fifty colonies working slowly in from one to five supers. If smartweed had behaved as did white clover, I never would have dared tell of it, for fear of being branded "the biggest liar in seven States." But cool nights came and colonies with four supers were crowded down to two supers, and others in proportion; but instead of getting any more surplus the bees stopped brood-rearing and even carried some honey from supers and filled brood chamber, so they are well supplied with honey. But even now, November 12, some hives have one super of shallow frames partly filled with honey, and the 8-frame brood chamber won't hold the bees. I expect to give each colony a cake of candy over frames, as per Abbott's plan. I am taking Mr. Reeves' advice and covering all hives with four thicknesses of newspaper. Then I put a store box over each to protect paper. I use quilt and lots of old clean rags over frames and winter on summer stands.

I never expect to see as good a season for honey as the past season; but, judging from what experience I had, I wish to just mention a few points.

If there are good indications for a good crop of white clover I most emphatically believe in stimulative feeding in spring. If in a good honey flow the swarming fever overtakes the bees I would rather let them swarm once and put them right to work in supers than to try to prevent swarming and have the bees loafing until the honey flow is over. Of course, if you can keep them from getting the fever and keep them busy, that is still better—if you don't want increase. I have some of the celebrated long-tongue Italians, also hybrids.

There was lots of red clover late in the fall in full bloom, but it did not worry the long-tongued bees. They did not work on red clover. Neither did they build as nice comb as the hybrids. However, I made several nuclei from one colony of long-tongued bees, and they did well, and are fair comb builders. The colony did not swarm at all; and I got three supers of comb honey from them—all second grade, and some partly filled sections. From a one-frame nucleus made in May, I got 60 pounds of comb honey and some unfinished sections. Others did not do so well, but built up to good colonies and were working in supers when the honey flow stopped, and were ready for the smartweed flow, which did not come except very moderately.

Williamsfield, Ill., Nov. 14, 1903.

FROM NEW ZEALAND.

(G. S. J. Small).

I CANNOT let this chance pass without expressing my opinion on this most interesting journal, a paper that will stand its own against all comers. Its editorials are as those that come from a man of far renown and long experience, the simple yet instructive style with which its correspondents place their meaning go to make it a paper for the bee-keeper, especially to the amateur. The principle it aims at, namely, to have correspondents in all parts of the world, is one that very few, if any, other bee journal can carry out, and is to a country like New Zealand invaluable.

We are now into spring, and the bees are returning to their hives laden with pollen, but a large number of keepers report heavy losses in their bees during this last winter, which, without a doubt, has been a very bad one in some districts in the North island.

The humble bee is doing much harm here to the little bees. Thousands of them are getting about and driving the honey bee away from the white clover, blue grass and other heavy honey-producing plants of this country. They even enter the hives and rob the little bees of their honey.

HONEY MARKET.

The editor, in July number, spoke of the notion that bee-keepers in America have of rushing their honey to the big towns, and perhaps obtaining less for it than if they sold to their local townsmen. I can tell our editor that America is not the only place where that is done. Here in New Zealand dozens of box-hive bee-keepers rush their honey to our big towns, pay heavy railway rates, and in return get 3d or 3 1-2d per pound or 4 shillings a dozen for comb honey, while the man who sells in his local town gets 4d, 6d, 5 1-2d per pound, and 6, 6 1-2, 7 1-2 and 8 shillings per dozen for comb honey, and no heavy railway rates of 3-4d per pound to pay in transit. I think it is the novelty of sending it to a large town.

I quote last summer's honey as follows: Strained refined honey, 4d per pound, that is, 8 cents; extracted, 5d, 10c, 5 1-2d, 11c; retail, 6d, 12c, 7d, 14c; comb honey, white, 4|- (one dollar), 5|-, 6|-, 4|-; yellow combs. 4|-, 5|-, 6|6.

Autumn and winter the honey has gone up about ½d, 1 cent., all round. there being great demand for pure extracted honey, while pressed refined is not so high in price.

Subject for next publication: "New Zealand Flora."

Marton, N. Z., Oct. 3, 1903.

THE VALUE OF DEEP FRAMES.

(W. W. McNeal).

AT THE risk of being told that my hobby is deep-frame hives, I will continue the subject in this number of The American Bee-Keeper.

I fully believe this is a matter of the first importance and when rightly understood, will challenge the interest of 75 persons out of every 100 who keep bees in a cold climate.

We cannot raise honey without bees and the little shallow combs do not afford that protection to the colony so essential to good wintering and early breeding. The shallow frame was designed expressly to overcome the protective habits of the bees in the storage of their honey. Can the advocates of the shallow frame deny this? Admitting, then, that this radical departure from the principles embodied in the old box-hive was to facilitate the harvesting of the crop—that the advantages are in favor of the apiarist and not the bees, how can any one fail to grasp the situation when the howling winds of winter sweep around the hives? If such construction of the combs is more economical of animal heat, why is it that the law that governs the bees does not direct her accordingly? On the contrary, we see in every instance that the depth of wholly natural comb exceeds the width of it. Bees build downwards far more readily than sidewise; for such construction of the combs is more in harmony with the shape of the cluster, both before and after the combs are built. Self-preservation is the basic principle in the economy of the hive. It is the hub in the bee's special form of government, and when we thwart their purpose by hive construction and manipulation, we must lend them the fostering care of Nature. They must be fed their winter's allowance of honey or syrup and an artificial climate must be created for the little colonies on shallow frames to counteract the ill-devised construction of them as a winter frame.

Not only then does this so change the nature of the case that principle in question is no longer involved, but the advocates of the shallow frame are very reticent about these necessarily extreme precautionary measures against the inroads of frost and ice, when they figure the cost of production of honey.

Although the bees may be forced to give up all, or practically all, of the fruits of their labors, their nature, however, remains the same and will manifest itself in various ways. The motive that impels their every action being necessarily a selfish one, they are very cautious and economical. This trait is evidenced by the queen's failure to readily pass from one set of shallow combs to another when the weather is cold. Their aversion to sticks and air-spaces, as expressed by the queen in that particular manner, loses its identity to the sweet influences of balmy days and a good honey flow only. But, alas, the numerical strength of the colony is insignificant and eggs then laid by the queen often fail to develop into bees in time for the harvest.

When the shallow frames are used in connection with large single-story brood chambers, as outlined in my last article, they are a valuable adjunct to any apiary. The large colonies in deep-frame hives require so much less care, so much less protection from the cold, and breed up, so much earlier in the spring, that the shaken-swarm system of honey production may be used if desired, with gratifying results.

The order of packing deep-frame hives is almost the reverse of that of shallow ones. These, instead of requiring the heaviest protection on top, need very little there at the beginning of winter. This makes the cluster form down near the entrance where it should be at that time. Now, on the contrary, if the hive is made warmer at the top to start with, the cluster will, as likely as not, take its position up there. To further demonstrate the correctness of this, please note that where a super of empty combs is left on the hive and covered well with forest leaves or fine-cut straw early in the fall, the bees will leave the well-filled combs of the brood chamber and go into the super, where they are sure to starve. By all means make the cluster form near the entrance on the center combs, even if you have to leave off all protection at the top, except the outer cover at the beginning of winter.

The secret of successful wintering in old box hives having deep combs is largely due to that hole in the top through which the bees enter the cap. The cluster is thereby made to form near the lower edges of the combs and as the days, weeks and months circle away, it moves up the combs no faster than the consumption of honey makes this an actual necessity. Food of the very best quality is always in close proximity and by the time of the approach of spring, the bees have hollowed out a most suitable nest for early brood rearing.

Dr. L. E. Kerr's fling of "nonsense" at this very important condition of comb arrangement for cold weather, page 223, "luckily" is not very damaging. He proves himself to be equally capable of writing the self-same way and in the rebound is dealt a harder blow than those who differ with him. After commenting favorably on the merits of a frame shallower that the Langstroth, he remarks that "some one has said that a deep frame winters best where the climate is a cold one." He then emphasizes the correctness of the assertion in these words: "So will an old box winter the bees in a still better condition; but who would think of going back to the old box hive on that account?" Following closely on this comes the announcement that "a colony on Langstroth frames, if they have sufficient honey, will stand an equal chance with any in the world." That may be good logic; but I'm unable to harmonize his statements, and until the Doctor throws a little more light on the matter, I suppose I shall have to stay in my own back yard.

No one, to my knowledge, has asked Dr. Kerr or any other reader of the American Bee-Keeper to go back to the system of the old box hive. The method I have given is far from that. It is the most practicable one I am acquainted with. It combines the best features of them all, is less expensive and gives one a longer period of freedom from the apiary.

I invite your interest, reader, in this free and easy way of producing gilt-edged honey.

Wheelersburg, O., Oct. 12, 1903.

"Pat" writes from Cuba: "I have decided to go back to the States in coming spring, at any figures, with no less than 600 colonies." Pat states that the honey flow was just commencing at time of writing, October 31.

Can you send us just one new subscriber?

BEE-KEEPERS OF GOTHAM.

(Leon D. Everett).

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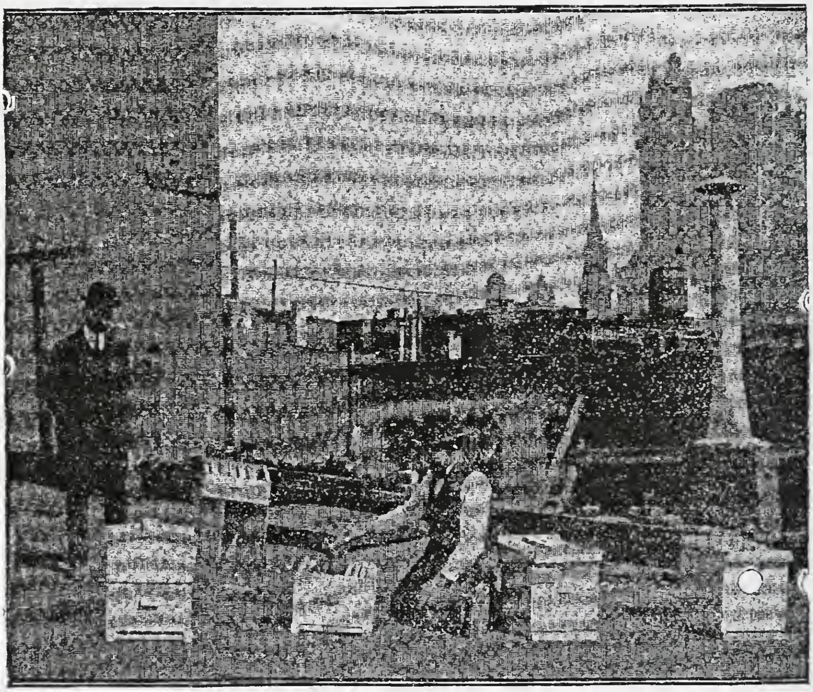
FAR ABOVE the din and strife of business, in the very heart of down-town business section of New York city, bees buzz merrily as they fly in and out of their busy homes. On the roof of many a tall office building, janitors keep apiaries of from five to twenty hives beyond the view of rushing humanity on the streets below.

The city bee, however, has to hustle for a living, for it cannot, like its country cousins, leave the hive and immediately strike a field of blooming clover or flowering buckwheat, but must stretch its wings and hie away to the blossoming shores of New Jersey, Staten Island or Long Island.

In spite of these handicaps, the roof-city bees manage to be a source of profit to their owners, and day by day return with rich stores of golden nectar, even though in some instances they have gone five miles from home in order to secure it.

Ranged in a row on the top of an office building in which bankers and brokers scheme, are five to twenty innocent-looking white boxes, or hives, in and out of which the little fellows go. Emerging from their hives, they rise above the smoke and haze of chimneys, and when at the proper height away they go for distant fields. The city bees never get lost, even though they may wander several miles from home; for every one of them is the possessor of compound eyes, which enable it to see great distances, and when returning home to fly in a line so straight that the "bee line" has become proverbial.



An Apiary on a Sky-Scraper.

Each one of these hives or "colonies," is a teeming city in itself, having a population of about forty thousand inhabitants, ruled over by a queen, only one of which exists in a hive at a time, and whose word is law. There is no such thing as a king bee, about which the ancients ignorantly wrote, not knowing the sex of the large bee they saw in every colony. The general population of the hive is made up of imperfectly developed females, known as "worker bees," and these are the honey producers, who alone range the fields in quest of hidden sweets.

In the early spring, the queen, or "mother" be, as she is often called, lays a number of unfertilized eggs, and, strange to say, they will hatch, and the bees that come from them are "drones," or male bees, whose sole purpose in life is propagation. The worker bees permit hundreds of these big lazy fellows to live in the hive during the swarming season of May and June, to insure the fertilization of the young queens, but when that season is passed they wage relentless warfare upon them, driving them from the hive to perish with cold and hunger. The drone is not a producer of honey, but a heavy consumer, and the "workers" seem to realize it. It is amusing to see them hustle the big lazy fellows out of the hive and hold them while others chew their wings off. so that they can not fly back; when this is accomplished, they are dropped to the ground to die. These drones or male bees are very large and easily recognized, being not unlike a big blow-fly, and, unlike the workers, they have no stings.

The average life of a worker bee during the working season is about five weeks, as she literally works herself to death laying up stores for bees yet unborn, and will die having consumed but a small part of what she made—illustrating perfectly the altruistic spirit. A bee will gather about a teaspoonful of honey in its life time, a strong colony bringing in often as much as fifteen pounds in a single day.

The bees that live over the winter are those that were hatched toward the last of the season, and they form the nucleus of the working force for the coming spring. The queen, however, lives for three or four years, as she does not work in the fields and leaves the hive but twice in her lifetime—first, when she flies forth to meet her mate in the air, and again when she comes forth the following spring leading a "swarm." She is the only perfectly developed female in the colony, and upon her falls the task of keeping up the population of the hive to take the places of the bees that are constantly dying of old age; thus we find her busily engaged in going from cell to cell, depositing her eggs, laying as many as three thousand in twenty-four hours. She is greatly revered by her subjects, who supply her every need, even feeding her, and this watchful care on their part is not strange, for they seem to realize that should she die the population in a short time would become extinct. Therefore, she is most carefully guarded as she moves from cell to cell, being followed by a constant retinue of attendants. On very warm days they will form themselves in parallel lines, from where she is to the entrance to the hive, and, by rapidly fanning with their wings, will send a current of cool air to her in order that she may be comfortable; the writer has frequently seen them doing this. When as a virgin queen she sallies forth on her matrimonial flight, the whole colony are greatly agitated, and when she finally returns they set up a perfect bedlam of delight to know that some ravenous robin has not with one gobble deprived them of their sovereign mother. The writer has frequently opened a hive that had been made queenless; their mournful hum of grief is then unmistakable; and when a new queen is supplied them their joy is unbounded.

What is commonly known as "swarming" is simply an overflow of the old bees led by the old queen, and is not, as is popularly supposed, made up of the young and newly hatched bees. In the spring, the population of the hive rapidly multiplies, and the honey is brought in in large quantities. The result is that the hive becomes crowded, and to relieve this congested condition the old queen, with about two-thirds of the old bees, saunters forth in quest of a new home. In a few minutes the air is full of thousands of bees, the humming of which can be heard a great distance. After flying for a few minutes the bees finally settle on the branch of a tree and await the return of "scouts" that have been sent off to find some old tree in the woods in which to begin housekeeping anew. If the swarm is not soon hived it will, upon the return of the scouts, abscond.

The foolish custom of ringing dinner bells and banging the pans has no part in causing the swarm to settle;

they would settle anyhow. It is a relic of bygone days, and dates back to Alfred the Great, who issued an edict that whenever a man's bees swarmed he should ring a bell and notify his neighbors, and thus avoid unpleasant controversies as to ownership. Strange to say, the average person still rings the bell, thinking that it causes the bees to settle.

When swarming, bees can be freely handled without fear of being stung, for the reason that each bee is at that time gorged with honey for its flight, which has so distended the abdomen that it is a physical impossibility for the little fellow to sting if he wished to. Herein alone lies the secret of the bee-keeper's immunity from being stung. Bees do not know their keeper any better than any one else. They do not sting him as much as they sting strangers simply because he understands their habits and avoids doing those things that give them offense.

The comb in a hive, in which the bees store their honey and pollen, and in which they rear their young, is made of beeswax, which the bees produce by filling their sacs with honey, then by hanging in clusters they generate a heat which converts the honey into little wax discs, with which they build their combs, consuming about ten pounds of honey to make one pound of wax. These little hexagonal cells are made with mathematical precision; in fact, by the closest scientific computation it is impossible to put any more of them into a given space than these little geometers of the fields have put.

As the average life of a worker bee is but five weeks, the question might be asked, "How, then, is the bee family propagated and continued?" It must be remembered that from early spring until late fall the queen mother is laying large numbers of eggs. The bees hatching, therefore, are constantly taking the places of those that die, and thus the population of the colony is kept up.

As the queen lays many eggs in early spring, the colony soon becomes strong, for the early fruit tree blossoms, and what few bees died of old age during the winter are not missed. This process is repeated year after year, and thus the family is kept from extinction. Should the queen die during the season, the workers will very quickly replace her by hatching one from some of the most recently laid eggs, but most bee-keepers become at once aware when a colony is queenless and give a new one to the bereaved community.

The queen deposits her eggs very carefully, one in a cell. These little white specks will fecundate and in twenty-one days produce a full-fledged worker bee. Three days after the egg is laid it hatches into a minute white larva, to which the bees supply food in abundance. For five days the larval stages continues, when the larva becomes a pupa, remaining such for thirteen days. Upon the twenty-first day from the laying of the egg, the fully developed bee emerges from its cell and is ready for its duties as a nurse.

The drone requires twenty-four days in which to hatch, while the queen takes but about fifteen and one-half.

Each hive has a perfect system of government, the population being divided into groups for various purposes. There are the little field bees who bring the honey, the nurse bees to care for the developing brood, the ventilating bees to cool the hive, and the water-carriers who bring this very important element. The entrance of the hive is carefully guarded by sentinel bees, who are relieved at stated times and whose duty it is to notify the busy population of the presence of enemies.

With these marvelous facts before us, we can very readily see that bee-keeping on the roof-top is a fascinating pursuit to those who know the bees' habits. One gentleman with whom the writer is acquainted has an office on the top floor of a building within sight of the city hall, and on the roof he has several colonies. With them he rears queens on quite a large scale, shipping them to various parts of the country. These queens are placed in a little wooden cage, and, with about twenty-five attendants are sent through the mails for two cents.

A trap is used to catch the queen if she should come out with a swarm without the owner's knowledge, and thus she is saved. Little spiral cages, hanging from the comb, contain the cells. These must be protected in order to prevent the old queen from destroying them before they hatch. When hatched, the queens are removed from the cages and given to queenless colonies. Swarming is prevented by constantly giving the bees more hive room, by addition of a new hive body.

Roof-top bee-keeping is not without its amusing features, as will be seen by the following: A friend of the writer had a number of colonies of bees on top of an office building on Cortlandt street, and did quite a rushing business in queen raising, until the un-unexpected happened, and for a time threatend him with a lawsuit. Just around the corner was a large candy factory, and on a certain day the workmen began to boil several barrels of sugar, the odor of which soon permeated the atmosphere for several squares. One of my friend's bees, passing by, caught a whiff of the steaming stuff and paused in his flight to investigate. After finding what he saw was a veritable Klondyke, he was off to notify the others, and in a few minutes all of the colonies began a raid thereupon, long lines of bees stretching from their homes to the factory. Had the workmen paid no attention to them, the little fellows would simply have filled themselves and departed in peace, but the men began to strike at them with their stirring ladles, and then the fun began. Quicker than it takes to tell it, the bees forgot the steaming sugar and landed squarely on the end of one man's nose, swelling it so badly that it made him look quite grotesque. The firm threatened to sue my friend, but better judgment prevailed, and it was found that all that was needed to prevent further raids was to buy a supply of wire screens and keep the rascals out. The bees, however, could not be blamed; they thought that boiling sugar just as legitimately theirs as the nectar in the fields that they roamed.

Nevertheless, in spite of these little accidents, many still keep bees on the roof tops in the heart of the business section of the great metropolis, and find it a source of profit.—Collier's Weekly, New York, Sept. 12.

"The bees have done better this fall than for several years," writes Mr. C. S. Harris, of Holly Hill, Fla., "and they are in good condition for spring work."

ONE, VS. FOUR-PIECE SECTIONS.

(James Heddon).

AS YOUR readers know, I have never been a friend of one-piece sections, neither is my trade, but to satisfy two or three local customers, I procured 5,000 of them in addition to about 25,000 four-piece. To reassure myself that I was not prejudiced, laboring under a mistake, I put into use in my own apiary this season 1,000, together with the several thousand I was using in the comb honey department of my apiary. I produced principally extracted honey. As my comb honey is now upon the market, I have gone through every phase, with sections, allotted to the bee-keeper, and, oh, horror! I would not accept one-piece sections as a gift if a $10 bill was presented with every box. I have found more objectionable features connected with them than I had any idea existed. I wonder that they are in use at all. They glue up far worse than the four-piece with their entire open top. They are soft, soaking honey and daub and stain much more easily than the white poplar. They do not come into square position when put together. Some are strained and others are loose. They will not bear cleaning with water when a little honey drops on them, as will white poplar. They are a miserable thing to handle in and out of cases and shipping crates, and it is only a trifle faster that they can be put together than the four-piece sections. I want no more of them and I cannot conceive that a basswood, one-piece section (and no other kind of wood seems fit to make them of) can much longer satisfy American bee-keepers. Good-bye, one-piece sections for James.

Dowagiac, Mich., Nov. 11, 1903.

OVER THE ROCKIES.

Western Trip of a Bee-Keeper Scribe.—Things Apicultural on the Pacific Coast.

(Thos. Chantry.)

Editor American Bee-Keeper:—In the July number was published my last letter. I have no excuse for not writing excepting lots of work.

To follow my course, last March I went over into Idaho from Utah and stopped off at Boise a few days to visit my old friend E. F. Atwater. I, perhaps, better not say "old friend," for he is quite a young man, but a long-time friend. If all goes well with him he will be one of the bee-keepers some day.

The valley of the Snake river is for hundreds of miles, and quite a distance in width, from 20 to 50 miles wide, one vast lava bed. The rock has decayed and formed a soil of varying depths. The action of time has made much of it very fertile, but much of the year it is left dry, so that nothing but sage brush seems to thrive; but here and there ditches have been made to convey the water over a small area and the luxuriant growth of alfalfa and other clovers, as well as small fruits and orchards, make a sure crop for honey. I was surprised to see so small a percentage of the valley under cultivation. I predict that we will live to see the day when large portions of this valley, as well as many smaller ones, will be made a veritable garden.

Idaho has a bee-keepers' association that it may well be proud of. I had fine opportunities offered me to locate there, but my family was in Southern California, so I went on to Washington, into the Walla Walla country, and on to the Yakima region.

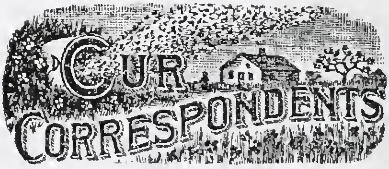
In all these places I found bees neglected. I don't mean all—there were a few progressive bee-keepers, but many bees in boxes or hives that were allowed to swarm and abscond with very little or no super room. Then on to Portland and over to Vancouver, Washington. Then up the Willamette Valley in Oregon, the garden spot of the United States, if not of the world. The clear flowing streams of water every little way, the ever present fir tree (the prettiest of the evergreens), the rich meadows and farms, the flowers and fruit of all kinds, (except oranges, lemons and figs), small fruits in the greatest abundance. At Abany I stopped over a few days and found, as every where, bees neglected. Many allowed to swarm at will and people content with a small box of honey.

The next stop after crossing the mountains of Northern California was in the broad valley between the coast range and the Sierra Nevadas, at Modesto. While there I met the foul brood inspector, Mr. Gilstrap, and found bees in swarming condition on April 1st. Alfalfa is just commencing to be a staple there, and bee-keeping is in a more progressive condition. April 3rd, I sped up the San Joaquin Valley and arrived in Los Angeles, April 4th, I immediately began looking over the country to find out conditions as to bees and prospective crop; with results that a younger brother and I bought an apiary about 15 miles northwest of San Bernardino, up against the foot of the mountain, where white sage is in profusion. As I worked during extracting season, looking down across the valley I could see the village of Colton, and every day I thought of you and those Cyprians, of years ago; and I guess some of their descendants have spread over the valley, for I never saw such cross bees as out there. I had a fine time at the convention. The most delightful feature to me was meeting so many of our leading bee-keepers, and editors, and I regret that you were not there that I might have met you also.

I shipped a carload of honey to Mitchell, S. D., and am back here in my old territory to sweeten up my friends, for all to whom I sold honey in former years are my friends as well as customers.

I would like to see the time when bee-keepers will see to it that our product in its purity will get to the consumer in a convenient, presentable, suitable package that will stand rapid handling that is necessary in railroad transportation.

Mitchell, S. D., Sept. 3, 1903.



Haverhill, Mass., Oct. 21, 1903.

To the Editor of the American Bee-Keeper:

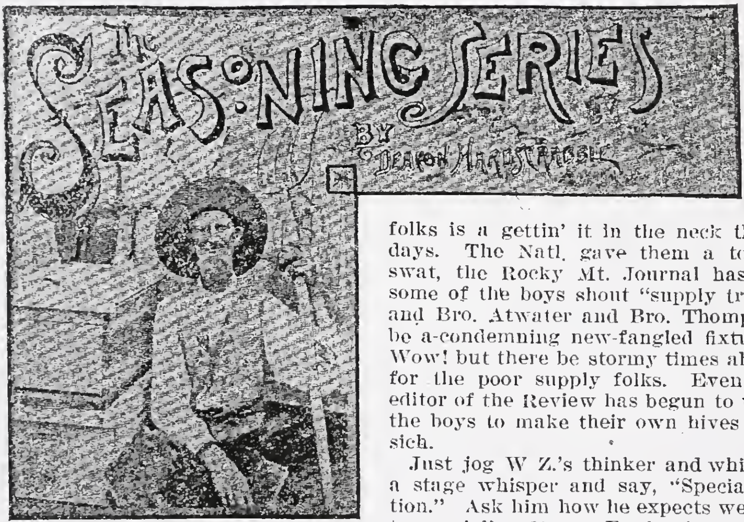
My bees all through the summer got only honey enough to raise their young, and I was considering the advisability of buying a barrel or two of sugar to feed them for the winter. In fact, had already got some for this purpose, when, on September 15, I noticed in a glass hive I had that the bees in that particular hive had begun to accumulate considerable honey. For about a week they piled up honey in good shape. There they stopped as suddenly as they began. Now, a short time before this I had examined my hives thoroughly and in no one of them was there over five pounds of honey, and upon looking them over after my glass hive had been nearly filled, I found all of the hives in fair condition, regarding stores.

Now, all they got, practically speaking, was obtained in one week, and that after the first heavy frost. They have obtained none since, and I congratulate myself and them upon their and my own good fortunes.

I consider this case very unusual, so report it to you.

This has been an unusually poor season in this locality. Very truly,

Jacob W. Small.



Dear Bro. Hill: Didst thou ever hear the old ballad that went –

"Up in a balloon, boys, up in a balloon,
Sailing round the little stars, sailing round the moon"?

I wot not—'twas afore your day The Deacon knows a deal more about balloons than you suspect. They are great things from which to get a perspective of the little worldlings. Now if you'uns had done climb up to the balcony of that 'ere honey house of yours—as high as safe for you--you'd have got a good perspective of my last letter. I didn't say nuthin' about "factions" being good. You said that. 'Twas the middleman's party what was It, and now Ain't, and 'tis the producers' party that Wasn't and now Is. Them 'ere middlemen and supply folks is a gettin' it in the neck these days. The Natl. gave them a tough swat, the Rocky Mt. Journal has let some of the boys shout "supply trust" and Bro. Atwater and Bro. Thompson be a-condemning new-fangled fixtures. Wow! but there be stormy times ahead for the poor supply folks. Even the editor of the Review has begun to urge the boys to make their own hives and sich.

Just jog W Z.'s thinker and whisper a stage whisper and say, "Specialization." Ask him how he expects we'uns to specialize Honey Production a few months, specialize selling a few months, specialize manufacturing some more months, specialize vacations a bit and specialize et ceteras a bit. I sort of opine that he's advocating scatteration. Bro. Hasty had ought to let his statistical mind loose on the subject of home manufacture. I reckon that cost of machinery, repairs, wasted stock, lost fingers and sich would more'n offset the supply man's profit.

The November Bee-Keeper is pretty good, considerin'. Opens up well with a "Smile that won't come off"—the one on Bro. Brodbeck. Sort o' caution the boys against a-presumin' too much on that smile. B. is all right so long as the boys toe the line.

Wish Bro. Johnsing had shouted his shout on Formalin earlier and louder. The know-it-all's shouted fust and the foller-the-leaders tried it and flunked, and as usual it wan't the fault of the dearly beloved, but of the gas or the pesky germs or su'thin'.

Guess again, chillun, then try Johnsing's way.

That 'ere Florida Brush is a great un—bully to swat ugly Syrians with, too.

"Water Cure," is it, that Mister Horn would have us try. Humph! Do he take bees for Filipinos?

Miller, of Little Rhody, wants us to believe that drones are first quality blankets for baby bees. Be he a-tryin' to turn this 'ere bee world topsy-turvey? It may tumble on him if he ain't keerful. But, confound him, I find he ain't so durned far wrong on some things. He annoys me.

So Pharr fetched a stagger at contradictory statements. He'll get 'customed to them if he reads the bee papers long enough.

You and Dr. Miller remind me of a pair of shears—you cut what gets between, but not each other. For youngsters you two make quite a team.

Brave chap, that Rescue Smith, to own up to his failures. What a sorry picture some of the boys would cut if they followed suit. Thunderation, I'd like to see 'em.

What for did you cut down the editorials? Best part of the paper, now and then. Puff up not thyself with vanity, because I drop you a compliment once in a while.

"Who pants for glory finds but short
 repose—
A breath revives him or a breath
 o'erthrows."

Yours as ever,
John Hardscrabble.

EXTRACTING UNRIPE HONEY.

In Gleanings for July 1, R. A. Burnett of the Chicago honey-dealing firm, introduces a discussion of unripe honey and its baneful effects upon the markets, by the following paragraph:

"In a recent number Mr. A. I. Root, in one of his Home articles, spoke of a bee-keeper in Northern Michigan, who sold her honey in a perfectly raw state to a confectioner, and that both the buyer and seller of said honey seemed to be well pleased with their operations. 'The producer sold a much larger quantity of honey from each colony of bees by taking it out of the combs before it was sealed and allowed to ripen before it was extracted.' "

The concluding sentence, quoted by Mr. Burnett, is obviously from Mr. Root's comment, to which he refers; and while Mr. Burnett forcibly condemns the practice of extracting unripe honey, he, in common with apiarian writers, permits Mr. Root's erroneous statement to stand unchallenged. Whether he does so through lack of knowledge upon the subject, or whether through regard for Mr. Root's lauded skill and wisdom in apiarian matters, is not apparent. Be that as it may, Mr. Burnett merely sanctions, by inference, a grave and most prevalent error, as we believe.

The popular belief that the yield is increased by extracting before honey has been in the hive a sufficient length of time to ripen, is probably based upon the assumption that a large per centage of water that would be otherwise lost through evaporation, necessarily enters into the bulk and correspondingly increases the avoirdupois of the product. The fallacy of the assumption will become readily apparent if the operator will accurately weigh a hive each night and morning during the extracting season, and note the extent of evaporation, and the relative degree of rapidity with which it takes place as the hours pass. In our experience upwards of ninety per cent. of the total evaporation will occur during the first night in the hive. This loss of moisture, however, does not represent or comprise the transition from raw nectar to ripe honey. It is but the first step, the primary stage in perfecting our commodity in Natures laboratory—the subsequent influences of its contact with the bees, though universally recognized and accepted, are not fully understood. Yet, as stated, that a beneficial influence is exercised upon the body and flavor of honey remaining for a protracted period in the hive, is positively known to every experienced apiarist, and this——

(Here we have to pause to announce the arrival of a bee-keeping visitor. We had reached this point when Mr. O. O. Poppleton, the very gentleman who first called our attention to the popular error under discussion, walked into our sanctum, where, by the way, he is always at home; and his occasional visits are highly appreciated. Of course, we made known the fact that we were just considering the "unripe honey" fallacy, for publication, and his immediate interest was plainly evident).

"The particular point to which attention should be drawn, Harry, is the fact that the practice of extracting unripe honey not only injures our market, but the idea that a greater amount of honey may be harvested by so doing should be dispelled. You don't get any more honey by extracting before it is ripe; and if this fact were generally known, the incentive to do so would be removed," said Brother P.

Mr. Poppleton further asserted that it was a great mistake to suppose that a colony would gather honey with greater energy after being extracted than before. The writer is convinced that the effect of such an overhauling is rather to retard to some extent honey-gathering operations. If the combs afford room to accommodate the incoming nectar, gathering and storing will be pursued with quite as much vigor as if every comb were entirely empty; while the disturbance must, necessarily, more or less hinder proceedings.

In this connection we beg to direct the attention of the reader to the last item under the Belgium heading, page 228 of The Bee-Keeper for October. This is but a logical result, though, perhaps, of rather more influence than one might think possible.

If it were a practical possibilty to extract all the honey at the close of each day, doubtless a greater quantity of honey could be secured; but such stuff would be worthless.

Mr. Poppleton advises us that peculiar conditions prevailing in Cuba afforded him an excellent opportunity to test the matter of evaporation, and that there can be no question as to the great reduction that occurs during the first few hours that the honey is in the hive; which amounts to practically the total loss in weight which is sustained through this cause.

Therefore, let not any one, novice or "experienced apiarist," seek to increase his crop record by extracting "green" honey. Even if it were true that more pounds might be secured in this way, the effect of such "honey" upon the markets is to undermine the very foundation of the industry, by creating disgust where admiration should exist for our product. Thus the scheme utterly defeats itself.

The whole thing is a delusion, which, though denounced by "authorities," has nevertheless been fostered through promulgating the false doctrine of increased crops.

THE Bee-Keeping World

FRANCE.

A new honey-knife, or rather uncapping tool, is shown in the Apiculteur. It is just like a mason trowel, with half its length cut off. The three edges are very sharp and the blade as thin as possible. It is the invention of Mr. Rousselle-Portmer.

Mr. Sylviac in the Apiculteur relates his experiment with a swarm found late in the woods and which he wintered. As a matter of fact, it was a mere nucleus. He estimated that there were only about one thousand bees. About two hundred died during the winter. The details of the feeding and the doings of the bees, especially their mode of grouping themselves, are very interesting. In order to keep together they cut a hole through a comb, so as to maintain a compact cluster and yet reach the honey on both sides. That swarm was wintered out of doors, but the winter was rather mild. The consumption of honey varied exceedingly. During the winter, that is to the first of March, the daily consumption of honey consumed by each bee averaged 28 thousandths of a gram. Considering the small number of bees the fact that the swarm was wintered out of doors, it is evident that the amount of honey consumed must have be n proportionately larger than usual in order to maintain the necessary temperature. Brood-rearing began on the 18th of March. Between March 20th and April 10th, the daily consumption was 10 grams per day when the weather was too bad for the bees to fly, and from 50 to 60 when they were ative. During that period what they could bring from the field was insignificant.

Mr. Kuhn (Apiculteur) made some experiment with foundation made with rollers and some made with presses. He soon discovered that the foundation from the presses is much less liable to bulge, or deform, than that from the rollers. He thought that the rolling process deforms or modifies the molecular nature of the wax, a sort of tempering effect, and that the application of heat would restore the original nature of the wax. So he warmed his sheets of wax as much as they could stand when putting them in the wired frames. And, sure enough, the foundation did not bulge or deform when worked by the bees, and the combs were perfectly straight. Whether Mr. Kuhn's explanation is correct or not, the fact itself is worth remembering.

Mr. E. Betmale (Apiculteur) took the trouble to watch daily a colony with a virgin queen. However, this was in April, that is at a very early period in the spring. Later in the season, the queen would have matched much sooner. The one in question came out the first time on April 9, but bad weather followed. Yet every fair day she came out several times, returning after a few minutes. On the 30th, that is three weeks after her first flight, she came out four times but the last time she remained out twentyfive minutes and returned having mated. At that time of the year the drones are scarce, and that explains the long delay in mating. The quick returning of the queen at each going out (except the last) seems to indicate that, contrary to the opinion generally held, queens do not go very far to mate. The most remarkable part of the experiment is that on May 4th, that queen came out, mated again, and returned half an hour later. This last feature deserves further investigation. If queens mate thus several times, it will explain the immense number of spermatozoa contained in their organs after the mating.

The question has often been raised whether the drones from laying workers or virgin queens are potent or not. Mr. Thevennin (Apiculteur) relates that he keeps Cyprian bees. After the honey flows, or rather after the drones were destroyed, he undertook to raise a large number of queens. A visit among the farmers of the neighborhood, revealed the existence of a number of colonies having either drone-laying queens or laying workers. Nevertheless, all his queens were purely mated.

SPAIN.

Mr. Antonio De Almany Bellet insists (El Colmenero Espanol) that the Dickel theory is false. He says that if Dickel's assertions were correct, the eggs from the laying workers and virgin queens should produce workers as well as those of the queens. To the uninitiated reader I will say that Dickel claims that all the eggs laid by the queen are the same, and that the difference of sex is due to some manipulation (?) of the workers.

The same writer also denies that the queen lays the kind of eggs she chooses, putting the drone eggs in the large cells and the worker eggs in the small cells. He claims that when the queen lays in small cells, the pressure of the cell on the body of the queen forces the spermatooza out of the sack in which they are contained and the eggs are thus fecundated; while, when laying in a drone cell, there is no pressure and therefore no fecundation. How a queen manages to lay a fecundated egg in a queen cell barely begun and where no pressure is possible, he does not say. In fact he is completely silent on that point.

Adrian Getaz.

AUSTRIA.

Editor Alfonsus of the Bienen Vater, Vienna, has received a colony of stingless bees from Brazil. The colony was sent by the German Ambassador. The Captain of the steamer on which it made its voyage gave it close attention during transit, supplied it with sweetened water every other day, and with wheat flour from time to time. From England it came by mail in six days. Mr. Alfonsus invites the bee-keepers far and near to come and see the bees.

It is claimed in B.V. that foul brood is on the increase in Austria.

Karl Lepsh, of Bohemia, claims to have observed that there is a class of bees that follows the illegal business of robbing by attacking heavily laden bees having dropped to the ground near their homes. Either by coaxing or threatening the tired workers, they induce them to give up the sweet load they have brought from the field.

From Deutsche Imker, Bohemia: The Bee-ant (Mutilla Europaea) is a rare, though one of the worst bee-enemies known. Her stinger measures 4 millimeters, and inflicts, when used, a wound much more severe and painful than the sting of the honey bee. The insect is a sort of Cuckoo and shifts the responsibility of bringing up its young upon other insects, particularly the bumblebees. The female mutilla lays her eggs into the larvae in the bumblebee nests, and after hatching the mutilla larva feeds on the young bumblebee and the food which is stored in the cells. One mutilla will kill sometimes hundreds of honey bees in a single raid, the latter not being able to seriously injure the former.

GERMANY.

Landwirt schaftliche Ztg. does not recommend to go into Phacelia growing extensively. The plant is not liked "first-rate" by domestic stock and must be fed green.

The honey bee is not legally regarded as dangerous in Germany a bee sting being considered an accident. The bee has also the name of greatly assisting in cross-fertilization and must therefore be considered a valuable help to vegetation in general, and is not a tresspasser. It is an undisputed privilege for any one to protect his property against bees as he would against flies by putting up screens, etc., but it is unlawful to poison bees the same as it would be to poison other domestic stock. The bee-keeper is of necessity holding for the damage his bees may do. The common laws touching and regulating the keeping of stock are, as much as practical, applicable in case of honey bees.—Hall. Ztg.

Rev. Klein after making a study of the female bee and the effect of the differently composed foods on the young growing bee has come to the following conclusions: 1. The female bee larva, when development has not yet advanced far, has in it united the two possibilities to either become a queen or a worker. 2. As soon as a larva is treated for a queen the development of those organs peculiar only to the worker is retarded, and vice versa. 3. The development for queen or worker is depending upon the kind of food given to the young bee during the growing period. 4. A change in the manner of feeding produces a change in the development even then when the development has already progressed in one or the other direction. 5. When for some reason it becomes necessary to make the change when development in the opposite direction has already begun, that, which has been accomplished can never be undone, nor can that which has been neglected be made good. 6. The earlier a larva is treated for queen the better the results.

Weygand made the claim at the Strassburg congress that the queen larvae after being sealed continues to feed on the royal jelly for some days by reaching back for it. He said he had removed the jelly from a number of queen-cells after sealing and in no case had he succeeded in obtaining a queen capable of becoming fertile.

It has often puzzled bee-keepers that colonies of equal strength have not given equal results. Brossard says on this point in Pfalz. Bztg. that he has observed bees of the same yard but of different colonies carrying different colored pollen; one colony bringing in pollen of yellow color, another of pale green, etc. He also observed that certain colonies worked on certain flowers of a more isolated locality for weeks, when other colonies had not yet discovered the same field of labor. Watching these colonies he found the majority of bees of one to come in heavily laden with honey, the majority of the other to carry only an insignificant amount. He therefore concludes that unequal results are often due to this cause.

A resolution adopted at the late Strassburg bee-keepers' congress reads thus: Every bee-keeper shall be obliged under penalty of a heavy fine to report to the authorities any case of foul brood occurring in his yard as soon as discovered. 2. Foul broody colonies are to be destroyed. 3. Bee-keepers should receive a recompensation from the State for such destroyed colonies.

According to Dtsch. Bfrd. Wax moth and their larvae may be destroyed by taking an iron kettle partly filled with vinegar and dropping into it a heated iron wedge, then confining the vapor with the infested combs.

Weygandt advises against the use of tobacco smoke when handling bees; says he has observed detrimental effects.—Imkerschule.

Always use rain water in rendering wax if water is used at all, says Centralblatt. Well water is said to tend to discolor the wax on account of impurities it contains.

F. Greiner.

WORLD'S FAIR NEWS NOTES.

Halle a Saale, Germany, will be officially represented at the World's Fair.

A model and the drawings of the new bridge at Kew, England, which was recently opened by King Edward, will be shown at the World's Fair.

A Milwaukee man claims to have invented an aerial tricycle which he will exhibit at the World's Fair and win the $100,000 prize. His machine is 60 feet long and 14 feet in diameter. It is to be propelled by human power. Aluminum enters largely into the make-up of the machine.

A line of automobiles carries visitors over the World's Fair grounds. The fee charged is 25 cents. Most of the points of interest are touched on the trip.

When the Liberty Bell goes to St. Louis to be exhibited at the World's Fair, it will be the first time the historic relic has ever crossed the Mississippi river.

The work of applying the staff on the Palace of Horticulture at the World's Fair has begun. The frame work of this building was raised in 18 working days.

California World's Fair commissioners claim they will make an exhibit of apples at the Louisiana Purchase Exposition that will rival Illinois, Ohio and all other apple producing States.

Twenty glaziers are putting in the window glass in the Palace of Agriculture at the World's Fair. The glass, if in one piece, would contain 189,000 square feet. There are 141,750 lights, each 18 by 22 inches.

Queen Victoria's Jubilee presents, which will be shown at the World's Fair, are stored in the vaults of a safe deposit company at St. Louis. En route they were constantly guarded by troops. When they arrived in St. Louis they were guarded by a squad of police who never lost sight of them until they were securely locked in the vaults.

Mr. R. Hinton Perry has completed the statuary which he was commissioned to execute for the World's Fair at St. Louis and the models have been sent to Mr. Karl Bitter, Chief Sculpture, for enlargement. They consist of groups of two athletic figures supporting a globe, and are to be used on the corners of the Palace of Machinery at the Fair. They are of a very decorative nature and will form most pleasing ornamentations to this splendid Exposition building.

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Subscribers receiving their paper in blue wrapper will know that their subscription expires with this number. We hope that you will not delay favoring us with a renewal.

A red wrapper on your paper indicates that you owe for your subscription. Please give the matter your early attention.

Editorial

An index to Vol. XIII is published in this number, for the convenience of those who desire to preserve and bind their numbers for reference. A glance over the list will serve to impart an idea of the diversity of subjects treated in our columns during the past year.

The first carload of comb honey ever shipped from Glenwood, Wis., pulled out from that station October 23, and was the product of the apiaries of Mr. Leo F. Hanegan, one of the most progressive bee-keepers in his State. Mr. Hanegan writes that he takes several bee journals, and can't do without them; but that he could give up others easier than the American Bee-Keeper. His verdict is that "it is a splendid journal."

So great has been the increase of our circulation, and so widely scattered, that we have deemed it advisable to secure, for the information of our readers, reliable market quotations regularly, not only from the principal trade centers of the United States, but from those of the West Indies, Europe and Canada; and we have, therefore, undertaken to secure these quotations from the world's chief honey markets.

The November number of the Progressive Poultry Journal, Mitchell, S. Dak., contains a long article entitled "Bee Culture," from the pen of Mr. Thos. Chantry, of The Bee-Keeper staff. The contribution is along educational lines in relation to bees and honey, and will doubtless prove of much interest, as well as add greatly to the fund of public information in regard to our mysterious pursuit.

Speaking of the National Association, the Bee-Keepers' Review says: "All of its officers, with only one or two exceptions, are extensive, practical bee-keepers, and know from experience what bee-keepers need." With this condition existing we may very hopefully anticipate an early grappling with the most momentous problems confronting the American producer of honey. It is well that it should be so.

Mr. W. S. Hart has returned from his European trip and is again among his bees and orange groves, at Hawks Park, Fla.

With the present number The Bee-Keeper completes its thirteenth and most successful year of publication.

Mr. O. O. Poppleton is enjoying his annual outing cruising among the Florida keys, off the southeast coast.

Several of our contributors have recently equipped themselves with a photographic outfit, in order to illustrate their articles in The Bee-Keeper. The modern periodical publication uses pictures, and they are becoming more and more popular. The American Bee-Keeper desires to use more photographs in the future than in the past, and we are therefore pleased to note the interest in photography awakening among bee-keepers. We shall be very glad to render any possible assistance to any of our readers who desire to attempt to secure pictures for publication in our columns. The editor of The Bee-Keeepr is, perhaps, not expert in photographic work, though he has practiced photography for fifteen or eighteen years, takes and regularly reads more than a dozen monthly photographic magazines, and may possibly be able to offer helpful suggestions. We are planning to make The Bee-Keeper for 1904 not only more interesting and instructive than ever before, but to have it more attractive in appearance, as well; and we trust our readers may be inclined to assist our efforts by freely contributing to our columns.

The twentieth century apiarist is hardly content to study and know local or State conditions pertaining to his business. A knowledge of universal conditions is a factor entering with important effect, and having a direct bearing upon the business of the specialist in honey production. It will be our aim to glean from the four corners of the earth, and present each month items of information relative to the bee-keeping world. It shall be our constant aim to keep our readers well informed, practically, historically, commercially, statistically and otherwise. In short, we shall strive to supply a bee magazine, without undertaking a reformation in religious or temperance matters, leaving such work for those publications which make a specialty these themes. We need the kind co-operation of our readers in this work, and trust they may accord us their generous support.

To its friends, and enemies as well, in every clime, The Bee-Keeper extends sincere wishes for a Merry Christmas and a Happy New Year.

Mr. George Bayliss, Consular Agent of the United States at Santiago de Cuba, and a great admirer of the American Bee-Keeper, sends us a clipping from a recent issue of Cubano Libre, which states that a co-operative apiarian concern has been established there with a capital of $900. The extract says that apiculture is one of the most promising elements of the island's agricultural resources. The new company is composed of the Messrs. Mariano Gomez Villasani, Mariano Marin, Luis Berenguer, Ernesto de Moya, Alfredo Antonetti, Joaquin Vazquez, Dr. M. Martinez Osuna, Facundo Bacardi y Jose Vicente Tacquechel, and the first apiary is to be established on the farm of Mr. Berenguer, in Cuabita. The firm name of the new concern is the Compania Apicultora de Santiago de Cuba.

In his Modern Farmer and Busy Bee, the Rev. Emerson T. Abbott says: "The American Bee-Keeper rejoices that the National Association is drifting into the hands of practical bee-keepers, and says that it is not necessary for a man to know anything about parliamentary rules in order to be president of the association." We wonder if all the information in regard to the "inwardness" and wickedness of the National Association given through the medium of his publication by Mr. Abbott is as misleading and far from the truth as is the paragraph quoted. We have never said that "it is not necessary for a man to know anything about parliamentary rules in order to be president of the association," and Mr. Abbott's lengthy criticism is, therefore, but an attack upon a man of straw of his own creation. If Mr. Abbott finds pleasure in making straw men and then proceeding to "knock the stuffing out of 'em," and scattering it to the four winds of heaven, that's Mr. Abbott's affair.

Captain H. H. Robinson, connected with an extensive apiarian enterprise at Matanzas, Cuba, writes that extracting will probably begin about December 1, this year. The captain is an expert photographer, as well as a progressive apiarist, and he is arranging to assist in supplying illustrations for The Bee-Keeper during the coming year.

Of Mr. Jas. U. Harris, the newly elected president of the National Bee-Keepers' Association, the Bee-Keepers' Review says he "is probably as good a parliamentarian as we have in our ranks—perhaps the best."

Reader, will you not be so kind as to assist us to the extent of seeing that all your bee-keeping acquaintances have an opportunity to see a copy of the American Bee-Keeper? If each of our present subscribers should grant this great favor, we would, doubtless, receive several thousand new subscriptions, and would thereby be enabled to dish up something extraordinary each month. We are exceedingly anxious to introduce several great improvements and shall do so just as soon as our subscription list will justify the additional expense. Let us all seek to hasten the day, and thus secure the best bee journal in the world, and at a cost of but 50 cents a year.

The attention of our readers who are also members of the National Association, is invited to the following appeal from General Manager France. Canada should be represented on the board, and The Bee-Keeper would be pleased to see Mr. McEvoy secure the merited place:

General Manager's Office,
Platteville, Wis., Nov. 5, 1903.

To the Readers of the American Bee-Keeper:

As it will soon be time for National Association members to vote for officers and amendments to the constitution, I wish to say to the members that Canada has 60 members and many more ready to join at their next annual meeting. They have no member on the Board of Directors, and should have one. I shall vote for Mr. William McEvoy to succeed E. R. Root.

He has done more for Canadian members than any other member, and has this season settled several cases for us. N. E. France.

The Irish Bee Journal has a department headed "Bee Views," conducted by "A. Spyglass," a writer whose ability combines practicability with wholesome humor. In fact, Spyglass is a dead mate for Editor Digges, in this regard and the two manage to keep the columns of the Irish Bee Journal well spiced with the wit characteristic of the Emerald Isle. The following extract is but one of many complimentary notices which have recently been paid the American Bee-Keeper by our highly esteemed contemporary:

Catching Wasps.—That jolly boy, Editor Hill, has a fling at your suggestion for catching wasps at the hives. He thinks it would lead to a big boom in beer. But you don't have 1,000 hives to the square inch in Ireland, and that is what H. E. H. has overlooked. (True. We do not cater for American bee-keepers. Small chance we should have there with H. E. Hill in the field. It would do us a lot of good, here in Ireland, if we all read his American Bee-Keeper every month. Tell H. E. H. that 2d. worth of beer will suffice for 10 hives. The "boom" is not imminent.—Ed.)

RATHER SAVAGE.

The last issue of the American Bee-Keeper has this statement: "The Jamaica Times reproduced a dozen or so items from the American Bee-Keeper, one of which was credited. This is encouraging, and we desire to express our appreciation of its crediting even one. Jamaica is progressing."

We are bowed down with sorrow over this, and what is not sorrow is contrition. We have stated once or twice in our Bee-Keepers' Column that we are indebted to our contemporaries for much of the matter there used, and we thought that sufficient; just as we count it sufficient when our pars. are made use of. We shall, however, see hereafter that our friend is credited severally and distinctly with anything we extractim literat from his well edited columns. We never dreamt of riling him or obscuring his glory.—Jamaica Times.

Thank you, brother; that's business and in accordance with journalistic propriety as recognized in the United States. Calling to a point of order should not be construed to imply displeasure. No "riling" about it, in this instance.

SECTIONS.

From present indications, a shortage in the basswood supply to an extent that would preclude the possibility of continuing the trade in one-piece sections, would not result in a suspension of comb honey production. The Bee-Keepers' Review for November views the situation in this wise:

"Four-piece sections have many friends, as is shown by the letters I receive. The one by Mr. Dibbern, given in another column, is a fair sample of them. I believe the time is now ripe for some one to begin the manufacture and sale of four-piece sections—to make a specialty of it and advertise them. If white poplar is lacking, make them of hard maple."

The letter by Mr. Dibbern, referred to, as published in the Review, follows:

"You are 'mighty right' in your comments on four-piece sections in last Review. I have used these sections for many years, but ran short this season, and used several thousand of the one-piece. Now, in hadling and scraping the sections, and in casing the honey, I can see the difference. True, it takes a little longer in putting four pieces together, but that is more than made up in scraping off the propolis, and then in looks they are simply 'not in it' with the four-piece. Then, too, the one-piece section has a bad habit of breaking off the bottom piece when removing the honey from the hive case.

Friend H., can you refer me to the best factory making the four-piece sections in perfect shape? The last lot I had were not good and I want to try another factory."

In this number of The Bee-Keeper, Mr. James Heddon, one of the very best living authorities upon the subject of honey production, airs his views in regard to the section proposition.

The writer has always been a "crank" on the four-piece section question, and like Mr. Heddon, would prefer to pay the market price for the four-piece style than to accept as a gift the folding kind. But they should be well made.

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In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "Fancy white," "No. 1, dark," etc.

Buffalo, Nov. 6.—There is an improved demand for fancy honey and it is moving well, with moderate supply. We quote, fancy, 14 to 15c; extra fancy, 16. The demand for beeswax is always good, with light supply at pres-

ent. Fancy is selling at 30 to 32c lb. Now is the time to market honey, if you want to use Buffalo. After January 1 it does not usually sell so well.
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Chicago, Nov. 7.—Supply of comb honey is large and sales are being forced, so that it is a little difficult to give accurate figures. Sales of fancy are not easily made at anything over 13c per lb., with less desirable grades selling lower. Extracted white brings 6 to 7½c, according to kind, flavor and package. Amber, 5½ to 6½c. Beeswax, 28 to 30c.
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Boston, Nov. 6.—Owing to the large amount of honey coming in, prices are softening a little. Fancy white we quote at 16 to 17c; A No. 1, 15½c; No. 1, 15c. There is practically no No. 2 in the market. Extracted, 6 to 8c, according to quality. Blake, Scott & Lee.

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Cincinnati, Nov. 20.—The demand for comb honey is slower now than it was six weeks ago, owing to the enormous quantities offered on all sides. Fancy comb is sold in single case lots at 14c. The supply of extracted honey is big, although the demand is good. We are selling amber extracted in barrels at 5 3-4 to 6 1-2c.; white clover in barrels and cans, 7 1-2 to 8 1-2c, according to quality. Beeswax, 30c.
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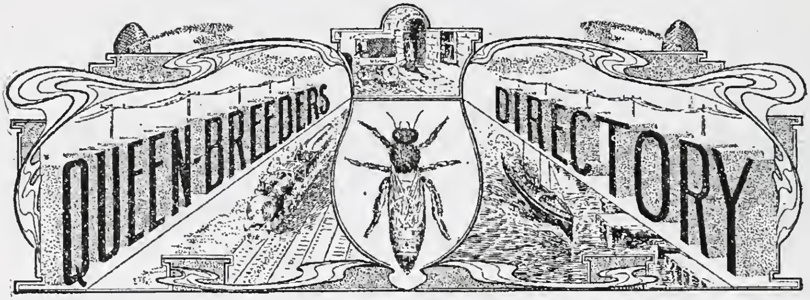

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We will pay 29 cents cash or 31 cents in goods for good quality of Beeswax, freight paid to Falconer, N. Y. If you have any, ship it to us at once. Prices subject to change without notice.
THE W. T. FALCONER MFG. CO.

Bee Supplies from Lewis

They are the finest.
THOUSANDS OF BEE HIVES,
MILLIONS OF SECTIONS,
Ready for Prompt Shipment.

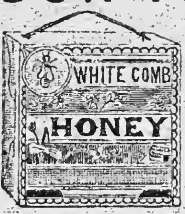
G. B. Lewis Co. WATERTOWN, WIS., U. S. A.

EASTERN AGENCIES, C. M. Scott & Co., 1004 East Washington St., Indianapolis, Ind.

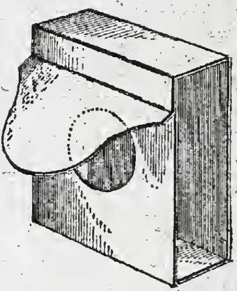
THE FRED W. MUTH CO.,
Front and Walnut Sts.,
CINCINNATI, OHIO.

Catalogue Free. tf.

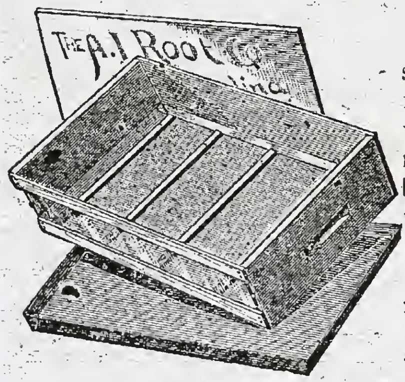
DON'T RELAX YOUR EFFORTS



after spending money for new hives and fixtures, valuable time in the preparation of these for new swarms, leaving other work at a convenient time (for the bees) to hive them; and now that a good crop is ready the next step is Attractive packages. Our assortment of packages for comb honey we believe would be difficult to improve upon for the purpose designed.

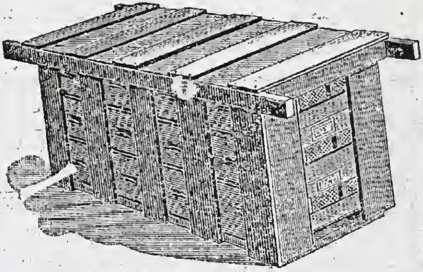


The special features of the No-Drip Cases for comb honey we have advertised for several years are the Paper Trays and Drip Sticks which provide for the collection of leaking honey in trays. These also prevent its oozing out at the cracks to gather dust and dirt and present a very untidy appearance to say the least. A light frame is now used clear around the glass in front which hides any unsealed cells in the outer row, and exposes to view only the finished work in the center. The material is white basswood. The joints are perfect fitting, the work being done by machine-filed saws.


The A.I. Root Co.

These No-Drip Cases are made in 12, 16 and 24 lb. sizes for regular 4¼ in. sections, as well as intermediate weights for plain sections. These are supplied with 2 and 3 in. glass to meet the demands of bee-keepers. The Danzenbaker and Ideal sections are also provided for with No-Drip Cases, but these are furnished with 3 in. glass only.

The value of attractive packages can not be overestimated, and wide-awake bee-keepers are beginning to realize this fact. In cartoons we supply two kinds, the Dazenbaker and the Folding; these are furnished for the regular sizes of sections. Both of these are furnished with special printing at a nominal charge.



Our packages for comb honey would be incomplete without shipping crates for shipping of honey. This one shown herewith is the regular package we ship out the cases in the flat. We can furnish these in the flat for the different sizes of the section cases at 60c. each, or $5.00 for ten.

For prices on any of the above or any other bee-keepers' supplies address any of our agents, or

The A. I. Root Co.,

MEDINA, OHIO.